

Health Committee New Zealand Parliament

Health (Fluoridation of Drinking Water) Amendment Bill

Submission by

Geoff N. Pain Ph.D.

2 February 2017

Summary

Parliament should pass a law to immediately end Water Fluoridation in New Zealand because

- The World Health Organization ranks Fluoride toxicity between that of Lead and Arsenic and recognizes Fluoride as a Low-Dose Endocrine Disruptor
- Proponents of Fluoridation variously have been conned, follow like sheep, are morally and intellectually bankrupt and in denial of the science, and/or have vested interest
- Fluoride harms are admitted behind closed doors and the whistle has blown
- Tooth decay is caused by creation of acid from sugars and starch in plaque and real reduction in tooth decay can be achieved by facing the facts
- Fluoride is a bio-accumulative systemic poison with no nutritional value
- New Zealand clinical trials and mass medication experiments with Fluoride have failed
- Fluoridation does not prevent tooth decay but does damage teeth
- Industrial waste Fluoride must be immobilized at source to prevent further pollution of New Zealand soil and food
- Industrial waste Fluoride delivers other sensitizers and carcinogens to the body
- Human rights are paramount
- Vulnerable groups in society and the unborn must be protected from harm
- Ceasing Fluoridation is the honourable, clever and economic thing to do
- New Zealand should join 95% of humanity who have already made the right decision

I discuss each of these heading points briefly below and attach a number of my publications that include over 1000 references to peer-reviewed scientific papers on the toxicology of Fluoride.

Recommended further actions by the New Zealand Parliament

New Zealand should commence a judicial review of its involvement with Food Standards Australia and New Zealand, an organization that has recklessly perpetuated the myth that Fluoride is a nutrient. New Zealand must ban sale of all Fluoride “supplements”.

New Zealand should ban all human trials where Fluoride is used, overriding any University “ethics approval”. The target for Fluoride intake should be as low as reasonably achievable (the ALARA principle) as with any poison.

New Zealand should set new, lower limits on residual Fluoride in phosphate fertilizer.

The World Health Organization ranks Fluoride toxicity between that of Lead and Arsenic and recognizes Fluoride as a Low-Dose Endocrine Disruptor

The material added to New Zealand water supplies is crude scrubbing waste, mainly Hydrofluorosilicic Acid contaminated with numerous toxic metals [Harland 2002]. This material has been tested on New Zealand rabbits [Rhone-Poulenc 1971] as well as humans. Results on New Zealand rabbits skin: “Severe erythema and edema” and for the eyes: “Severe and permanent corneal opacity with scar tissue occurred”.

As summarized succinctly it is all about dollars: “Fluorosilicate is widely used as it is significantly cheaper than Sodium Fluoride. Plant operators do not have to manually handle fine powders. The acid is also the cheapest source of fluorine. However, it is corrosive and tends to fume, particularly at concentrations of above 20%. Its main drawback is that it is a comparatively dilute source of Fluoride. 15% acid contains just under 12% fluorine by mass, whereas Sodium Fluoride contains 47% and Sodium Fluorosilicate 60%. Over long distance transport costs can make solid chemicals more attractive. All manufacturers of superphosphate produce hydrofluorosilicic acid as a by-product.” [Harland 2002].

The World Health Organization (WHO) classifies Fluoride as a “Chemical of Concern” and ranks its toxicity between that of Lead and Arsenic, both of which are considered so dangerous that they have no “safe” level for human exposure. As both Lead and Fluoride have targets for human consumption of zero, or in practical terms, as low as reasonably achievable (the ALARA principle), any intelligent person can see the same must apply for Fluoride.

Fluoride is readily absorbed directly through the oral tissues – no need to swallow!

In the stomach a large proportion of Fluoride is converted to the extremely hazardous, tissue necrotizing, Hydrogen Fluoride (HF) molecule, a gas at body temperature. HF then readily migrates through the airways, stomach and intestines to wreak havoc throughout the body [Sauerheber 2013].

The huge literature resource on Fluoride includes descriptive terms including:

- Cytotoxin
- Clastogen
- Mitogen
- Genotoxin
- Carcinogen
- Mutagen
- Low-dose Endocrine Disruptor
- Neurotoxin

These terms are not used by promoters of Fluoride chemicals and papers that include them are deliberately excluded from sham “studies” of the “safety and efficacy” of Fluoridation [see for example, discussion in Deal 2015, Saul 2012].

In 2013 the United Nations and the World Health Organization officially recognized Fluoride as a Low-Dose Endocrine Disruptor linked to Diabetes and Obesity [Bergman 2013, Vandenberg 2012].

The highest rates of adult obesity among OECD countries are reported in countries with artificial fluoridation, including the U.S.A, New Zealand, Australia and the Republic of Ireland.

Some human populations have been exposed to volcanic emissions rich in Fluoride. As mentioned recently [Pain 2015a], the largest recorded knock down of humans, animals and crops by Fluoride was the eruption of Lakagígar in Iceland over an eight-month period between 1783 and 1784, where a mixture of Hydrogen Fluoride and Sulfur Dioxide is estimated to have claimed up to 6 million lives directly or indirectly (through starvation due to loss of livestock and crops) in the Northern Hemisphere [Wikipedia 2015].

The Queensland Government [2015] summarizes the toxicity of Fluoride as follows:

“Acute Fluoride poisoning is manifested by vomiting, diarrhoea, abdominal pain, cyanosis, severe weakness, dyspnoea, muscle spasms, paresis and paralyses, cardiovascular disorders including ventricular fibrillation, convulsions, coma and death. Fluoride kills by blocking normal cellular metabolism. Fluoride inhibits enzymes, particularly metallo-enzymes involved in essential processes, causing vital functions such as the initiation and transmission of nerve impulses to cease. The strong affinity of Fluoride for calcium leads to hypocalcaemia”.

Research at the molecular level has shown that some other life forms have evolved the machinery, absent in humans, to eliminate the Fluoride toxin from their cells, [Li 2013, Stockbridge 2015]. It is of course the chronic exposure to sub-lethal amounts of Fluoride that is of interest to opponents of fluoridation.

New Zealand rabbits are frequently used in studies of Fluoride toxicity [Bian 2010].

In 1954 the Australian National Health and Medical Research Council became concerned about the high levels of Fluoride intake by people working in hot conditions, stating: “cane-cutters in Bundaberg consume as much as 10 litres per day of which 4 litres is tea” “Assuming 0.5 ppm in the water and 2.5 ppm in the tea, the maximum fluorine intake could be 16.5 mg/day”. Note that today, 1.5 ppm Fluoride is allowed in Australian fluoridation, so that such workers would actually consume 26.5 mg/day. This is about one-twelfth the lethal dose. This comes as a shock to many interested in nutrition [Stanton 2015].

In 2007 a rushed and defective review of Fluoride [NHMRC 2007] dispersed its findings of evidence of harm, which I have collated and presented below. Those marked with an asterisk were classified by the NHMRC as supported by statistically significant data:

- Cancer – Takahashi 2001*
- Dental Fluorosis*
- Congenital malformations*
- Osteosarcoma (males)*
- Alzheimer’s disease*
- Mental retardation (High F, Low I)*
- Goitre*
- Urinary stone disease*
- Cardiovascular disease
- Thyroid Cancer
- Osteoporosis
- Decreased Bone Density
- Fracture
- Down’s syndrome
- Anaemia during pregnancy
- Age at menarche
- Infant mortality
- Sudden infant death
- IQ reduction
- Skeletal fluorosis

Despite being a specific requirement of the NHMRC tender, the review omitted its findings on the known impact of Fluoride on the kidney and those who suffer kidney disease [NHMRC 2007 Part B, Pain 2017b].

Australian Federal, State and Territory Governments have a long and sad history of failing to protect public health and have conspired to suppress relevant public health data and in particular evidence of vulnerability of groups [Yazahmeidi 2007].

One of the most significant findings against Fluoride is the discovery that hydroxyapatite enhances the mitogenesis of mammary cells, amplifying the malignant process and resulting in accelerated tumor growth [Wilson 2014]. Recently Fluoride, delivered by mandated fluoridation, has been linked to Hypothyroidism [Peckham 2015], Diabetes and Obesity [Vandenberg 2012, Pain 2015b], Pre-term Birth and Impaired Neurodevelopment [McArthur 2015] and Attention Deficit Hyperactivity Disorder (ADHD) [Malin 2015].

Proponents of Fluoridation variously have been conned, follow like sheep, are morally and intellectually bankrupt, in denial of the science, and/or have vested interest

The toxicology of Fluoride has been intensively studied since the 19th century and each week approximately 10 new peer-reviewed scientific publications appear, increasing our knowledge of its harms in exquisite detail.

Fluoride toxicity denial resembles Global Warming denial. Politicians have been duped by the Fluoride industry and are reluctant to admit that they have caused suffering to hundreds of millions of people through forced fluoridation of public drinking water supplies.

For the bureaucrats who have sanctioned or actively promoted water fluoridation to admit that they have given the wrong advice to the politicians for decades is a question of conscience that leads to fear of exposure, loss of position, reputation and belief in self.

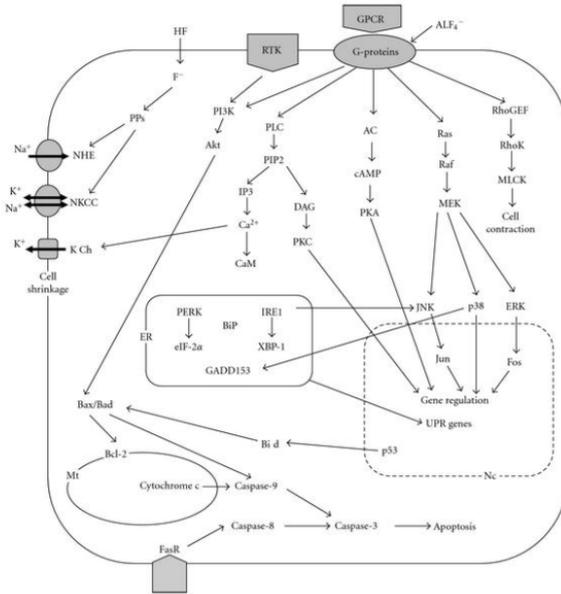
Denial is a psychological crutch.

Some of these bureaucrats, including scientists and medicos, have developed a strategy that goes beyond denial to the mongering of myths.

The following figure from 2012 shows a “simplified” scheme of what was known at the time [Agalkova 2012]. Not every Parliamentarian can be expected to absorb this molecular level of toxicology, but the New Zealand Government should employ people who can. Pretending that such knowledge does not exist is an insult to the electorate.

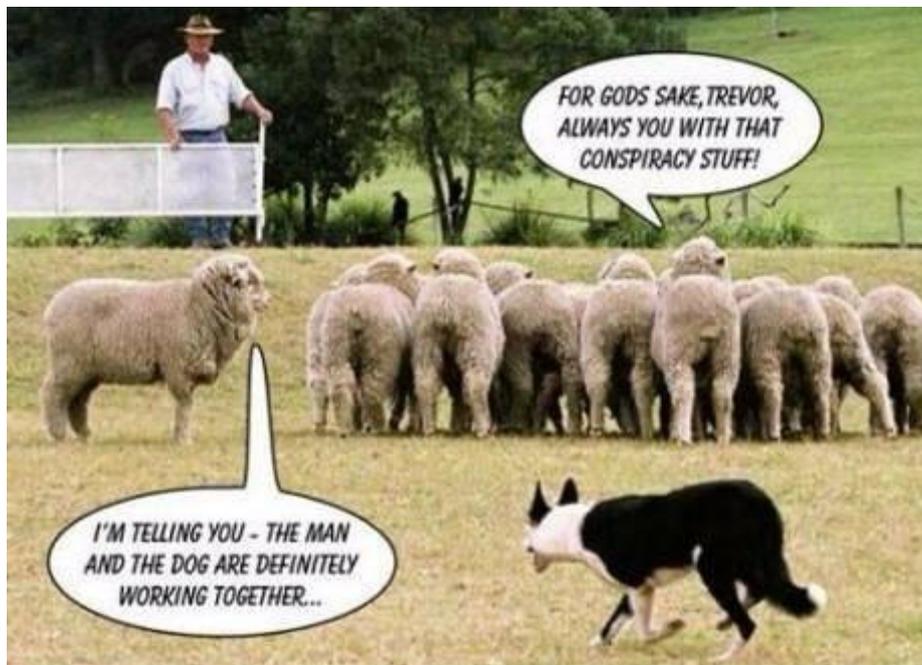
Natalia Ivanovna Agalakova and Gennadii Petrovich Gusev.
 2012
Molecular Mechanisms of Cytotoxicity and Apoptosis Induced by Inorganic Fluoride.
 International Scholarly Research Network
 ISRN Cell Biology Volume 2012, Article ID 403835

Figure 1: A simplified scheme of intracellular molecular mechanisms involved in fluoride toxicity and apoptosis. Nc: nucleus, ER: endoplasmic reticulum; Mt: Mitochondria; RTK: receptor tyrosine kinase; GPCR: G protein-coupled receptor; FasR: Fas receptor; PI3K: phosphoinositol-3 kinase; Akt: Akt kinase; PLC: phospholipase C; PKC: protein kinase C; PIP2: phosphatidylinositol 4,5-bisphosphate; IP3: inositol 1,4,5-triphosphate; DAG: diacylglycerol; CaM: calmodulin; AC: adenylyl cyclase; PKA: protein kinase A; RhoGEF: Rho guaninenucleotide exchange factor; RhoK: Rho kinase; MLCK: myosin light chain kinase; PERK: RNA-activated protein kinase-like ER kinase; IRE1: inositol-requiring protein-1; eIF-2 α : eukaryotic translational initiation factor 2 subunit α ; Xbp-1: X-box binding protein 1; Bip/GRP78: BiP/glucose-responsive protein 78; GADD153: DNA damage-inducible protein; PPs: protein phosphatases; K Ch: K⁺ channels; NKCC: Na⁺-K⁺-2Cl⁻ cotransport; NHE: Na⁺/H⁺ exchange.



Fluoride is able to stimulate G-proteins with subsequent activation of downstream signal transduction pathways such as PKA-, PKC-, PI3-kinase-, Ca2+-, and MAPK-dependent systems. G-protein-independent routes include tyrosine phosphorylation and protein phosphatase inhibition. Along with other toxic effects, fluoride was shown to induce oxidative stress leading to excessive generation of ROS, lipid peroxidation, decrease in the GSH/GSSH ratio, and alterations in activities of antioxidant enzymes, as well as to inhibit glycolysis thus causing the depletion of cellular ATP and disturbances in cellular metabolism. Fluoride triggers the disruption of mitochondria outer membrane and release of cytochrome c into cytosol, what activates caspases-9 and -3 (intrinsic) apoptotic pathway. Extrinsic (death receptor) Fas/FasL-caspase-8 and -3 pathway was also described to be implicated in fluoride-induced apoptosis. Fluoride decreases the ratio of antiapoptotic/proapoptotic Bcl-2 family proteins and upregulates the expression of p53 protein. Finally, fluoride changes the expression profile of apoptosis-related genes and causes endoplasmic reticulum stress leading to inhibition of protein synthesis.

If you have paused to reflect on the central problem, you will appreciate that the person who tells you the emperor has no clothes is always vindicated, and is not a “conspiracy theorist” or member of the “tin foil hat brigade” as labelled by the establishment.



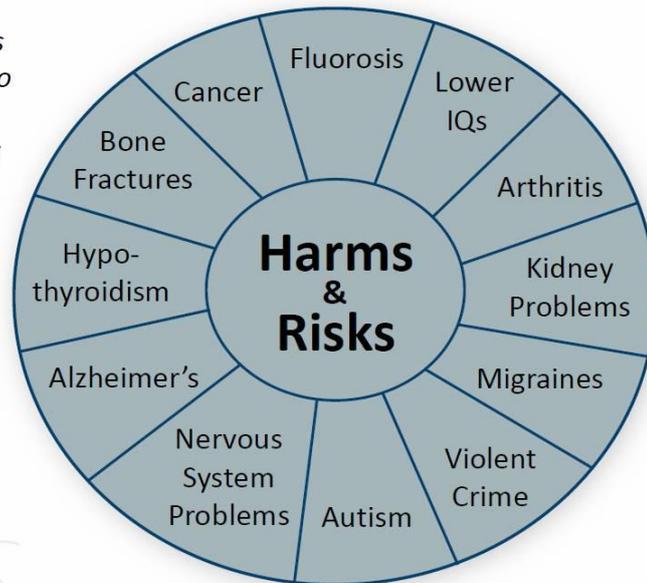
Fluoride harms are admitted behind closed doors

The following figure is from a leaked document produced by an industry lobby group that advises its clients and targets to avoid talking about the harms and risks of Fluoride. Please take a moment to read that circle of destruction a couple of times – Fluoride industry expertise, now available to the public!

Takeaway: Frame the issue correctly



Opponents are likely to win if the dialogue is trapped inside this message wheel



In 2015 the Obama administration recommended a massive decrease in the allowable concentration in American drinking water from 4 mg/litre to 0.7 mg/litre.

This sent shockwaves through the entire Fluoride industrial waste industries as forward orders from the few remaining countries that fluoridate were slashed.

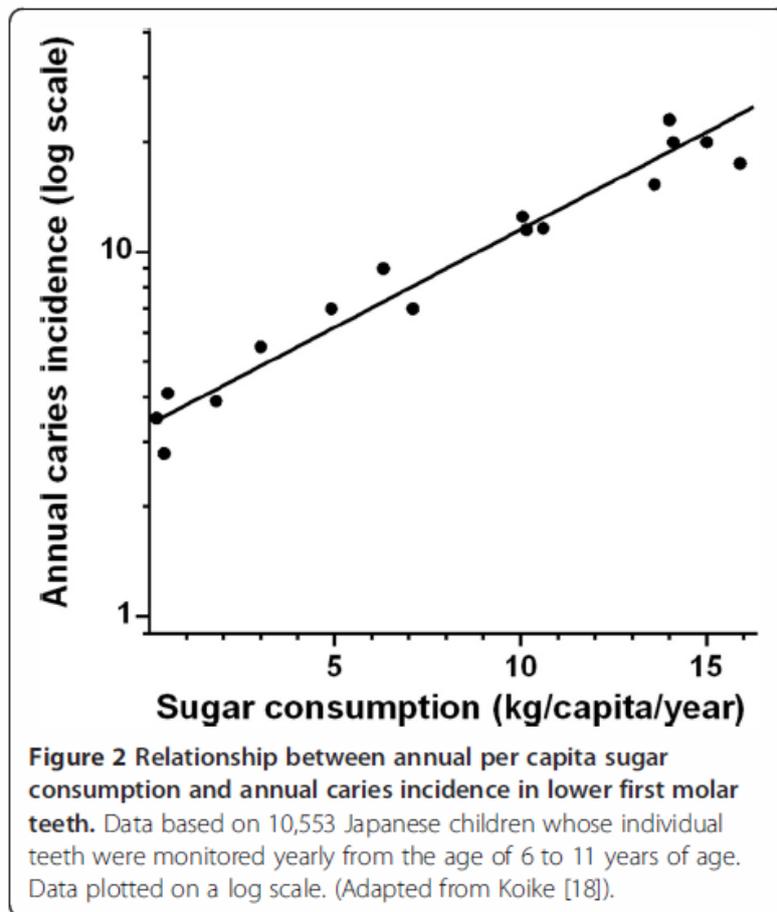
Tooth decay is caused by creation of acid from sugars and starch in plaque and real reduction in tooth decay can be achieved by facing the facts

The New Zealand Parliament must ditch the myth that Fluoridation, mass medication with the intention of prophylaxis against tooth decay, can work. Please admit that the cause of dental decay is absolutely known to be the generation of acid by bacteria in dental plaque.

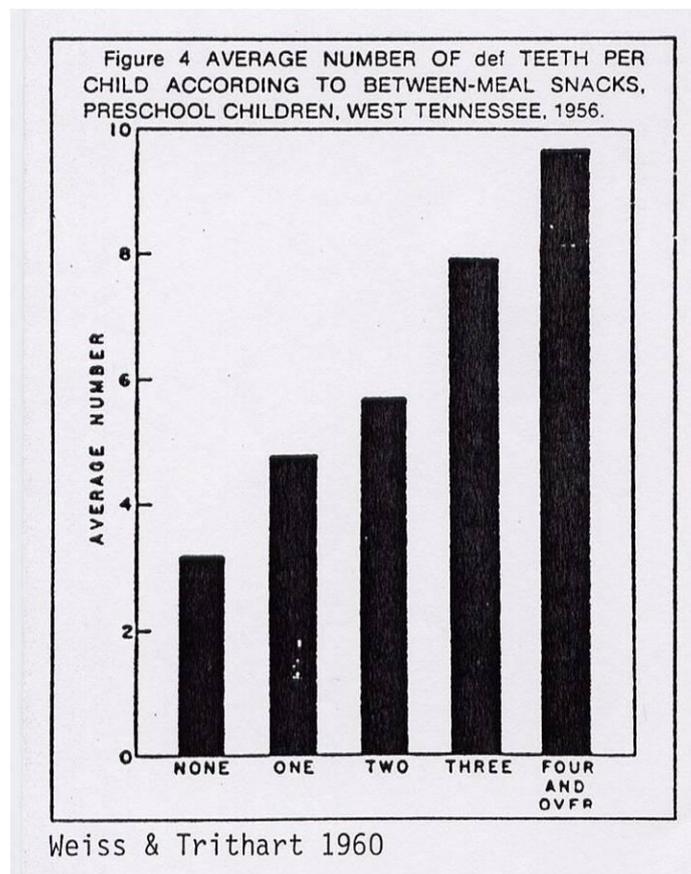
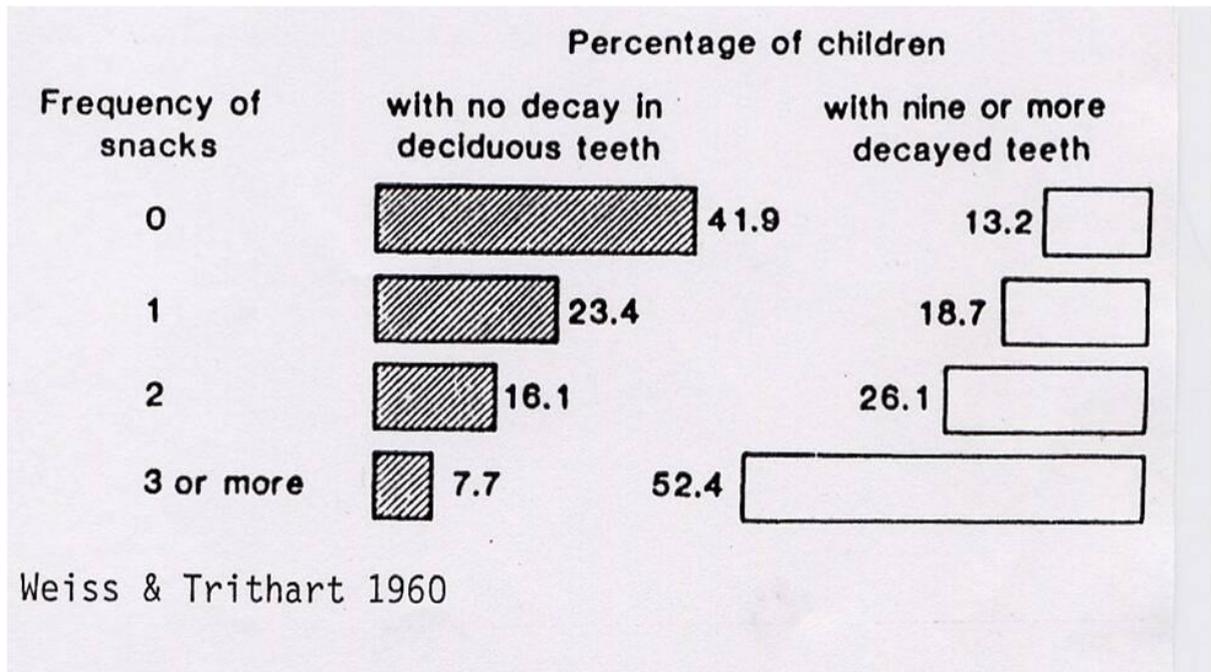
Once that is acknowledged the New Zealand Government can invest in programmes that will see real reductions in tooth decay for both adults and children.

Some have suggested a sugar tax while others prefer a carrot approach based on education from an early age. The sugar industry need not panic as fuel ethanol is a growing and more sensible use of their product.

The following figure [Sheiham 2014] elegantly displays the incidence of tooth decay versus sugar intake.



Starchy foods have also been known for more than 70 years to cause tooth decay as shown in the following figures [Weiss 1960], which shows the clear cause and effect relationship between frequency of between meal snacks. Increased snacking frequency dramatically increases the number of teeth with decay in children.



To the dismay of many readers, it is also necessary to destroy the myth that substituting fruit for sugary and starchy foods will lessen tooth decay [Arora 2009].



Image made by nature protector Natubico; www.vivism.info

Sydney University Researchers find Fruit increases **Dental Caries** Incidence

funded by Centre for Oral Health Strategy, **NSW Health**

Fruit consumption was associated with higher odds of caries experience, OR =2.83, (CI95 1.38, 5.58).

Arora A, Evans RW, Blinkhorn A, Sivaneswaren S, Sujeer A. 2009. 9th World Congress on Preventive Dentistry 2009. Is the Consumption of Fruit Cariogenic?

Through the horrors of war, data has been gathered on one positive outcome of trade embargos. The following table shows a staggering reduction in tooth decay in Iraqi children who had their supplies of sugary and starchy foods cut off. The data shows decay rates before and after the United Nations Sanctions (UNS) [Jamel 2004]. Note that rural children had much better teeth than urban dwellers before and after the sanctions.

Age in years	SES sample	Before UNS			After UNS		
		N	Mean	SD	N	Mean	SD
6-7 (dmft)	U 1	253	6.5	2.9	247	3.3	2.0
	U 2	267	8.8	3.9	270	4.6	2.4
	Rural	535	1.9	1.3	530	0.7	1.1
	Total	1055	4.8	4.0	1047	2.3	2.4
11-12 (DMFT)	U 1	247	5.4	2.4	243	2.5	1.5
	U 2	255	8.7	3.6	260	2.9	1.5
	Rural	511	1.3	1.0	508	0.5	0.5
	Total	1013	4.2	3.8	1011	1.6	2.9
14-15 (DMFT)	U 1	246	5.9	3.2	249	2.7	1.9
	U 2	260	10.7	3.3	261	2.9	2.0
	Rural	441	1.8	0.9	429	0.9	0.4
	Total	947	5.3	4.4	939	1.9	1.8

Fluoride is a bio-accumulative systemic poison with no nutritional value

Humans evolved with access to surface rainwater and were initially dependent on the obvious sources of creeks, rivers, lakes and springs that contained little or no Fluoride. Only relatively recently in human evolution have humans accessed groundwater through sunk wells, and this has led to identification of major hazards such as Arsenic and Fluoride.

Indeed the groundwater Fluoride problem is now recognized by the World Health Organization [WHO 2014] which states that Fluoride causes an extensive toll of human suffering and lists:

- Neurological damage
- Reduced IQ scores in children (see also Xiang 2003)
- Dental and skeletal fluorosis
- Osteosclerosis
- Calcification of tendons and ligaments
- Bone deformities
- Conjunctival hyperaemia
- Respiratory disorders
- Chronic cough
- Bronchitis
- Chronic Obstructive Pulmonary Disease
- Exacerbation of Asthma
- Lung Cancer
- Haematological Disorders
- Ischaemic Heart disease
- Carcinoma of the Trachea
- Cerebrovascular Disease
- Digestive Disorders
- Skin Diseases (perhaps referring to Fluoroderma here)
- Rheumatic disorders
- Nervous conditions
- Hearing and Visual disorders
- Cognitive Decline in older people

Fluoride, Asbestos, Uranium, Lead and Tobacco (FAULT) are multibillion dollar industries that have caused immeasurable harm to humans who have recently discovered that decades of propaganda claims that the products are “safe and effective” are demonstrably false. Each of these industries has a history of denial of harm, suppression of evidence, attempts to avoid litigation and compensation of victims.

In a last ditch attempt to retain public drinking water as a conduit for disposal of Fluoride, an industrial waste product, myth-mongers are attempting to promulgate the “Big Lie” that Fluoride is a nutrient.

In 2011 in Australia and New Zealand, the Big Lie was stated, by anonymous authors, thus: “Fluoride is necessary for the mineralisation of teeth and bones with approximately 99% of Fluoride in the body found in calcified tissues” [FSANZ 2012].

This study also deliberately prepared foods in non-fluoridated water, thus resulting in false low estimation of Australian total dietary Fluoride intake.

The European Food Safety Authority [EFSA 2013] could not be clearer and states unequivocally “Fluoride is not an essential nutrient” and also “No signs of Fluoride deficiency have been identified in humans”.

The fundamental nutritional studies of Fluoride, proving it has no positive role in human development are more than sixty years old [Maurer 1957].

In 1963 the USFDA stated that Sodium Fluoride used for therapeutic effect [e.g. water fluoridation] would be a drug, not a mineral nutrient [Lovering 1963]. In 1979, the USFDA ordered that all government documents remove all references to Fluoride as an "essential nutrient" or even a "probable essential nutrient." "The USFDA has never received or ever reviewed, much less approved, even the Fluoride drops or tablets (which are pure pharmaceutical grade Fluoride) for safety or effectiveness". [Kennedy D, personal communication].

In 1966 The International Society for Research on Nutrition, Vital Substances and the Diseases of Civilization (founded by Dr. Albert Schweitzer in 1954) issued a statement opposing fluoridation which included "Fluoride is an enzyme poison which can cause irreversible and unpredictable diseases." [cited in Connett 2015].

The United States Public Health Service stated "The United States Public Health Service does not say Sodium Fluoride is an essential nutrient" [USPHS 1966].

Numerous scientific journals have subsequently published studies demonstrating that Fluoride is not a nutrient [Diesendorf 1990]. The US National Research Council [1993] stated "Fluoride is no longer considered an essential factor for human growth and development".

In 2002 Belgium banned Fluoride deliberately added to salt [Belgium 2002].

The United States Food and Drug Administration [2006] will not allow Fluoride to be added to vitamins or supplements that claim a nutritional benefit.

As pointed out by Needham [2010], the Fluoride content of the body "is not under physiological control and that is the fundamental factor that differentiates between a substance that is a nutrient and one that is simply a contaminant".

In 2011 the European Commission stated "Fluoride is not essential for human growth and development" [SCHER 2011].

In 2011 in Australia and New Zealand, the Big Lie was stated, by anonymous authors, thus: "Fluoride is necessary for the mineralisation of teeth and bones with approximately 99% of Fluoride in the body found in calcified tissues" [FSANZ 2012]. This study also deliberately prepared foods in non-fluoridated water, thus resulting in false low estimation of Australian total dietary Fluoride intake.

In 2014 the Israeli Government banned water fluoridation to protect the health of its citizens. In 2014 an excellent review reiterated the fact that Fluoride is not a nutrient and pointed to the known harms caused by this toxin [Peckham 2014].

In 2015, flying in the face all the historical and rigorous science outlined above, the unsupported claim was made in Ireland "thereby it (Fluoride) could be considered an essential dietary nutrient. As with all dietary nutrients it is possible to have either too little or too much in the diet" [Sutton 2015].

Fluoride is a bio-accumulative toxin that our bodies attempt to eject through the kidneys, hair, skin and nails. Fluoride is a member of the so-called "bone-seeking" poisons due to its ability to displace hydroxyl groups in the Hydroxyapatite that forms the mineral content of our bones.



The use of the artificial Fluoride radioactive isotope ^{18}F allows direct imaging of where the Fluoride attaches to critical body sites. Each black dot is formed by disintegration of a fluorine atom releasing a high energy particle. The figure at left [Gerety 2015] shows how the body attempts to remove the toxin rapidly by concentrating fluoride through the kidneys and bladder. Note the sites of attack of the toxin.

The age/weight- based estimated absorbed radiation doses (mGy/MBq) from intravenous injection of Sodium Fluoride ^{18}F injection is shown in the figure below. Note the high concentration in the kidneys.

Below is front page news from a Queensland newspaper discussing in 1947 severe Fluorosis in humans as well as millions of sheep.

FLUOROSIS FROM BORE WATER GRAVE DANGER TO SHEEP INDUSTRY

BRISBANE, June 6.—A grave report of fluorosis in humans and animals in the western areas of Queensland dependent on supplies of bore water has been presented to the Cabinet and has caused much concern.

The bore water in the western areas is stated to contain a world's record quantity of fluorine, and State experts tonight said that the "dress circle of the Queensland sheep area" was affected.

The report lists serious cases of fluorosis among men, women and children.

The report, which will be presented to the Cabinet in full next week, is expected to warn the Cabinet of the risk of fluorosis to Brisbane residents from vegetables, notably cabbage, grown with the aid of superphosphates, which contain fluorides.

The highlights of the report are understood to be the need for appreciating immediately that some fluorine bores have a fluorine content exceeding 20 parts in 1,000,000—far exceeding the content of the water in some provinces in China, where humans are deformed by fluorosis.

The worst-affected areas are throughout the north-west and south-west, but fluorosis has also been found in the central-west.

The more-recently-opened bores appear to have the highest fluorine content.

Affected water can be treated successfully for human consumption, but it would be uneconomical to treat bore supplies for stock.

The only remedy appears to be the closure of bores in the worst areas and reliance on surface water traps.

The presence of one part in 1,000,000 in water is beneficial to the teeth and bone structures, but the difference between a beneficial amount and a toxic amount is small.

“Serious Cases of Fluorosis in Men, Women and Children” – Queensland 1947

A Brisbane doctor stated tonight that excess of fluorine caused teeth to become mottled and pitted and extremely brittle. Small growths appeared on the bones and serious deformity occasionally occurred.

Approximately 2,000,000 of the State's 16,000,000 sheep are stated to be affected with fluorosis, which halves the average life of an animal by affecting the teeth and bone structure.

An official of the United Graziers' Association said tonight that land values throughout the affected areas would fall with the issue of the report and the Government would be asked for drastic reductions in rents.

A grazing official said the report made it clear that the sheep industry was faced with a serious problem. Fluorosis now stood out as the main reason why the State's sheep population had been fairly static, with small lambings.

The figure below shows how millions of Queensland sheep suffered horrendous deaths through disintegration of their teeth and jaws caused by Fluoride [Harvey 1952].

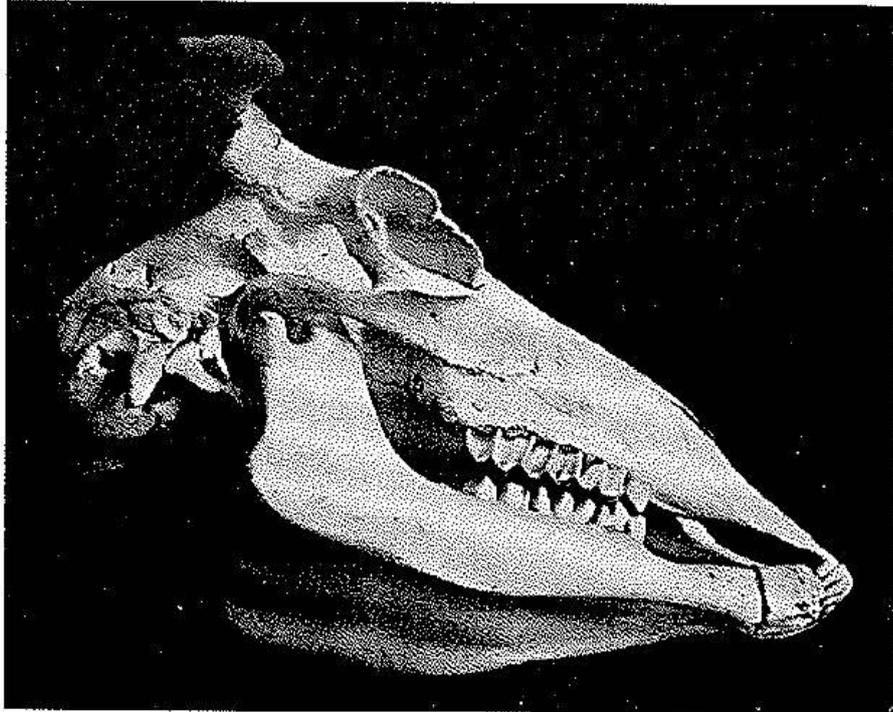


Fig. 83.
Upper and Lower Jaws of a Normal Animal.

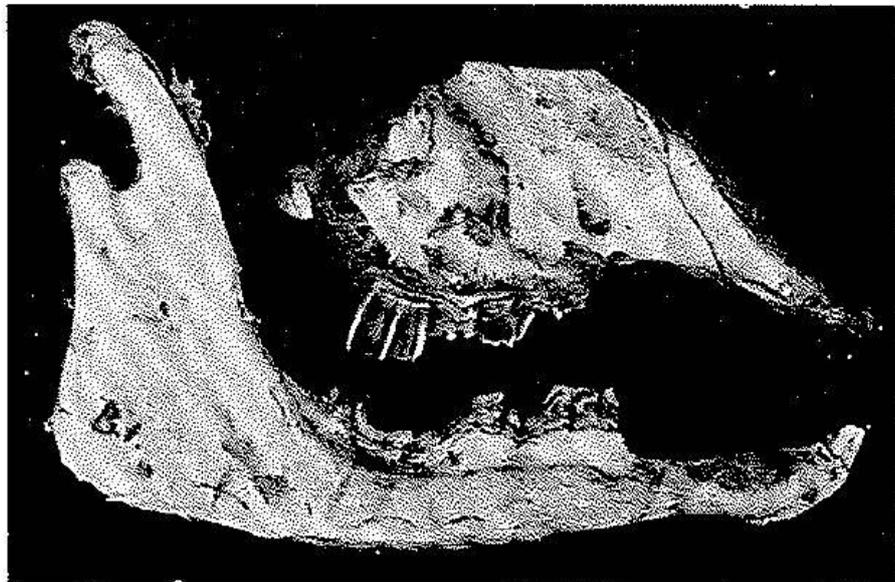


Fig. 84.
Abrasion of the Molars and Premolars of Sheep Using Water Containing 5-7 p.p.m. Fluorine and Depastured on Hard Mitchell Grass Country. Note the compensating wear on the upper and lower molars and premolars.

New Zealand has also experienced major stock losses from Fluorosis as a result of the use of superphosphate with high residual Fluoride content that has contaminated large areas of New Zealand agricultural land.

Massey University

Will soil ingestion cause Chronic fluorosis ?

A diet of > 60 mg available F/ Kg DM on a continuous basis leads to symptoms of Chronic fluorosis (Clark and Stewart 1983)

Lameness in cattle



Tooth wear in sheep



Risk of chronic fluorosis increases with increased topsoil F concentration, and rate and duration of soil ingestion

How much ingested soil F will be absorbed by the animal ?

Te Kōwhiri
ki Pūrāhoro

Skeletal Fluorosis in humans results in increased bone fracture rates that correlate with the visible Dental Fluorosis.

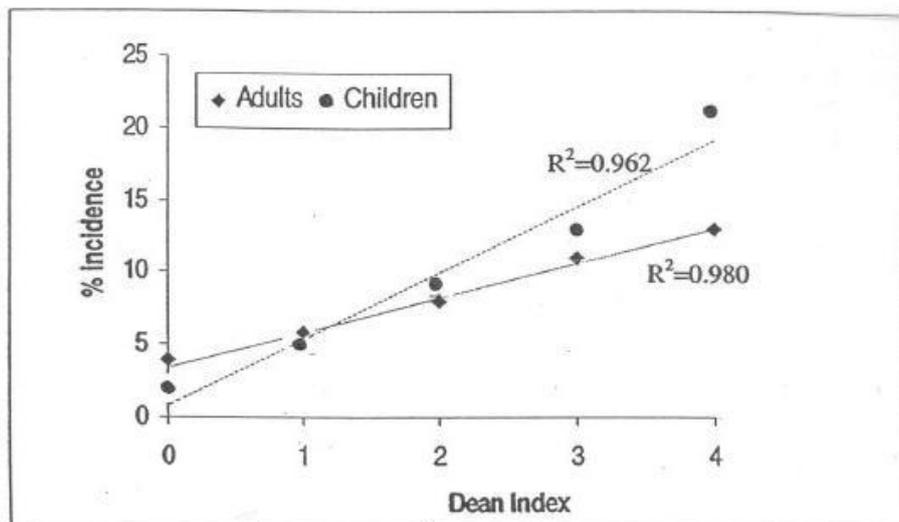


Figure 4. Incidence of bone fractures plotted against the severity of dental fluorosis (Dean's Index) for children and adults in the Guadiana Valley in the state of Durango in Mexico (from Alarcon-Herrera et al, 2001).

Human suffering from Fluorosis does not have to be as dramatic as a fracture. Here we see through the use of Transmission Electron Microscopy (TEM) the microscopic changes in bone caused by Fluoride [Kakei 2016] as observed in post-menopausal women.

Fluoride accelerates Post-menopausal Osteoporosis by altering Hydroxyapatite

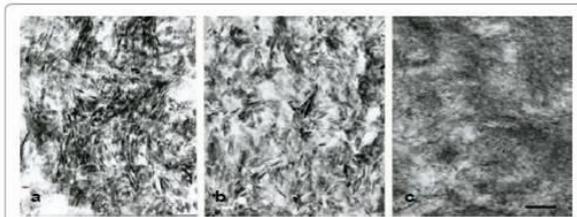


Figure 2: Lower magnification of electron micrographs of minerals observed in the control (a), X-ray-opaque (b) and X-ray-transparent areas (c) of the calvaria obtained from the combined group. Minerals of X-ray-transparent areas are less abundant than those in X-ray opaque area. (a-c): same scale, bar = 100 nm.

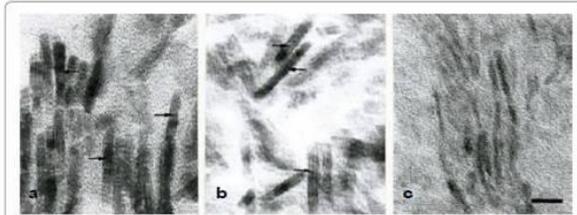
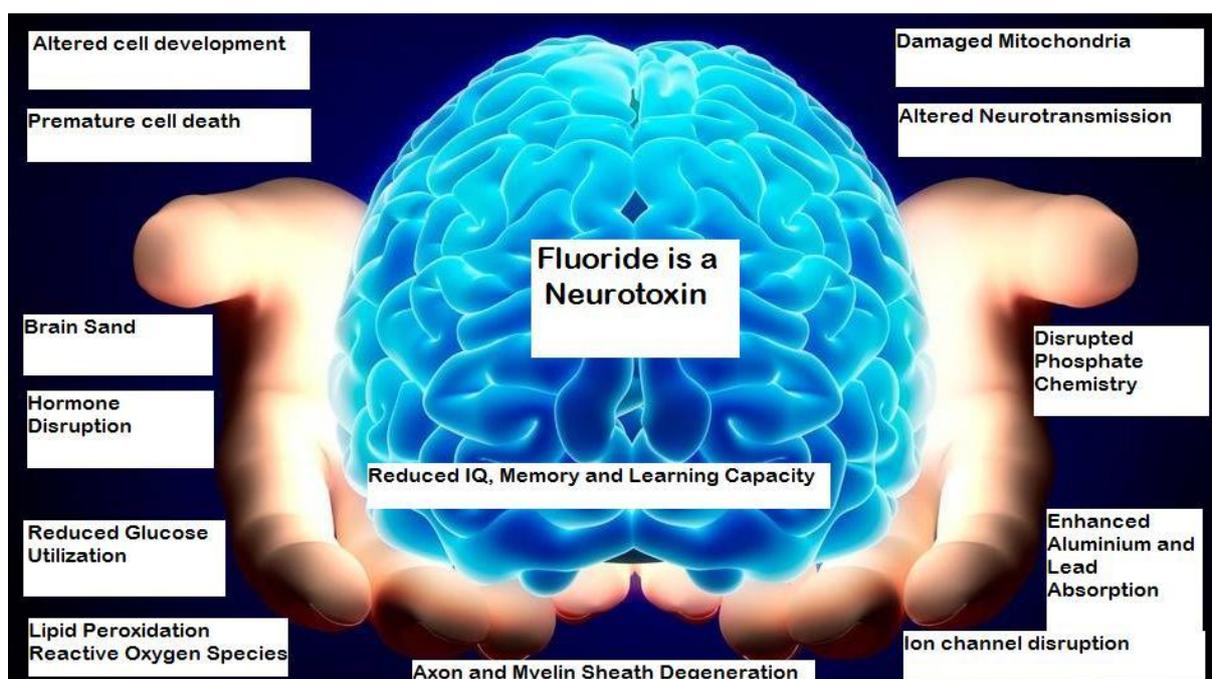


Figure 3: Higher magnification of electron micrographs corresponding to Figure 2. Minerals observed in the control (a) and in the radiopaque areas (b) are crystals showing central dark lines, whereas those in radiolucent area (c) are amorphous and not crystallized. Arrows indicate the central dark lines. (a-c): same scale, bar = 10 nm.

Obvious change in crystal morphology due to Fluoride in Estrogen deficient rats

Mitsuo Kakei, Masayoshi Yoshikawa and Hiroyuki Mishima 2016 Fluoride Exposure May Accelerate the Osteoporotic Change in Postmenopausal Women: Animal Model of Fluoride-induced Osteoporosis. *Advanced Techniques in Biology & Medicine* 4(1).

Fluoride is a developmental neurotoxin and I recently reviewed the mechanisms [Pain 2017a].



Fluoride is a developmental nephrotoxin as I recently reviewed [Pain 2017b].

Fluoride is a Nephrotoxin

Mutation of Cells

**Apoptosis –
Premature Cell Death**

**Decreased Cell
Number**

Enzyme Disruption

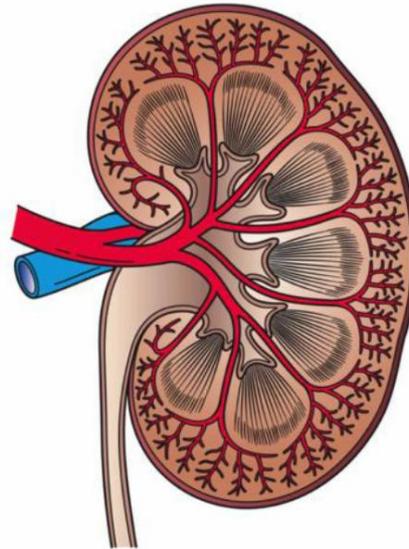
Oxidative Stress

Lipid Peroxidation

**Reactive Oxygen
Species**

**Ion channel
disruption**

Cancer



**Calcification of soft
tissues**

**Phosphate chemistry
disruption**

Kidney Stones

Pyelonephritis

Hyperparathyroidism

**Bone matrix
resorption**

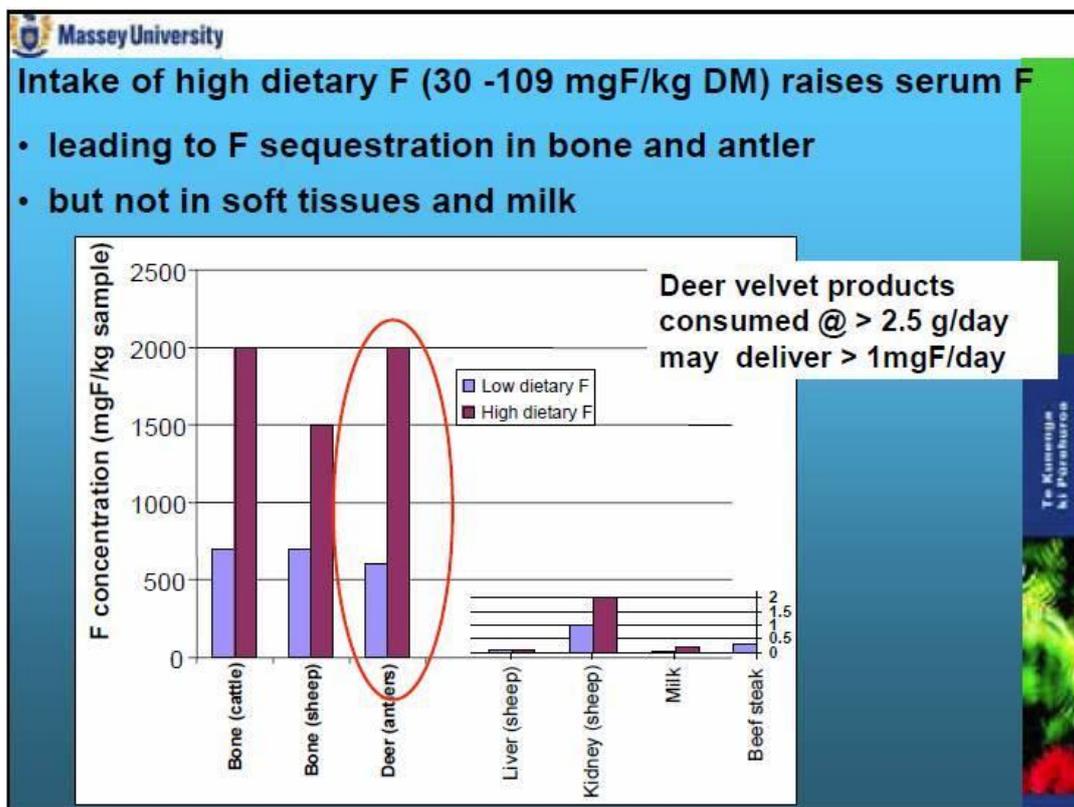
Osteomalacia

Rickets

Osteoporosis

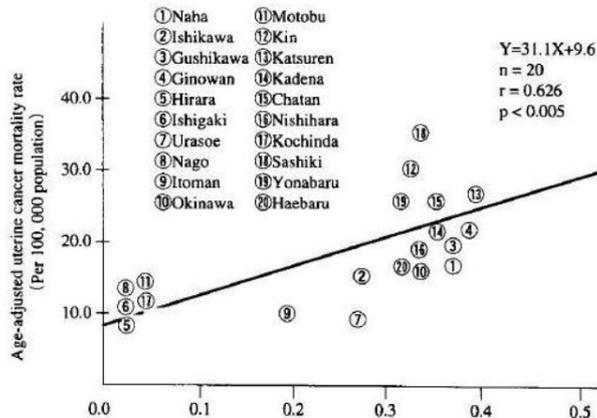
Chronic Kidney Disease

Fluoride accumulates in the milk and kidneys of New Zealand sheep:



Fluoride causes cancer as I have reviewed [Pain 2015a].

Cancer of Uterus in Japanese women Deaths versus Fluoride in water (ppm)



5 March 2014
Western Australia
Fluoridation of Public
Water Supplies Advisory
Committee

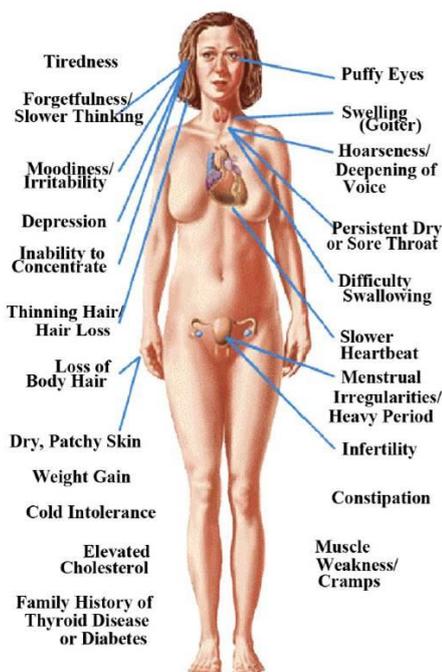
Simply **"NOTED"** (see below) this peer-reviewed data showing dead Japanese women who died from **Cancer of the Uterus** as a result of US Military Fluoridating water in Okinawa.

The Committee noted the remaining international agenda papers, in particular:

- Tohyama E, "Relationship Between Fluoride Concentration in Drinking Water and Mortality Rate from Uterine Cancer in Okinawa Prefecture, Japan", Journal of Epidemiology, Vol 6 No 4, 1996, available from: www.ncbi.nlm.nih.gov/pubmed/9002384

Fluoride causes Hypothyroidism and cancer of the Thyroid

Signs and Symptoms of HYPOTHYROIDISM



If crystals of **Fluoride**-doped **Hydroxyapatite** are detected in your Thyroid Gland, your cancer surgeon will recommend rapid removal of the entire organ to reduce the high risk (> 18%) of **malignant cancer**.

Yoon, D Y et al 2007. **Peripheral Calcification in Thyroid Nodules**
Ultrasonographic Features and Prediction of Malignancy
J Ultrasound Med 26:1349-1355

Fluoride reduces fertility

Fluoride Reduces Chance of Getting Pregnant and going full term – Sperm Damage

Sun et al 2011 Arch Toxicol 85, 1441-1452 Fluoride-induced apoptosis and gene expression profiling in mice sperm in vivo

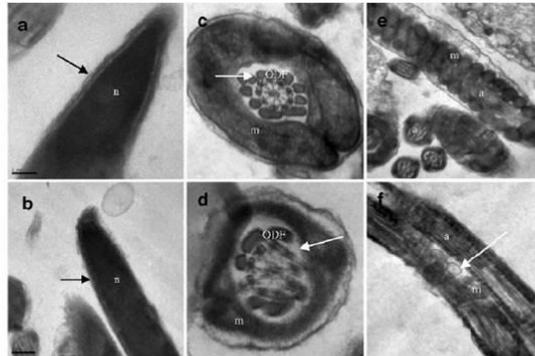


Fig. 1 Electron micrographs of mouse sperm nucleus and the middle piece of sperm tail. a Sperm nucleus (n) from controls showing the integral perinuclear membrane (arrows) surrounding the n (magnification: $\times 80,000$). b n of sperm in mouse exposed to 150 mg/l NaF showing the absence of perinuclear membrane (arrows) (magnification: $\times 30,000$). c Cross-section of the middle piece of sperm tail from control group presenting normal arranged outer dense fibers (ODF) as the arrow pointed (magnification: $\times 100,000$). d Sperm tail of mouse treated with NaF showing the loss of ODF (magnification: $\times 100,000$). e Mitochondria (m) in control sperm are tightly arranged around the axoneme (a) (magnification: $\times 30,000$). f m in mouse sperm from NaF group is swollen and less dense than the controls (arrows) (magnification: $\times 30,000$).

Table 2 Effect of 49-day ingestion of sodium fluoride on fertility of male mice (mean \pm SEM)

Group	No. of males	No. of females	Pregnant females	No. of implantations	No. of viable fetuses	Resorptions/implantations
Control	10	10	9/10 (90%)	8.13 \pm 0.64	8.13 \pm 0.64	0/73
150 ppm	10	10	4/10 (40%)*	7.75 \pm 0.47	6.00 \pm 0.41*	7/30*

* $P < 0.05$ (compared with the control group)

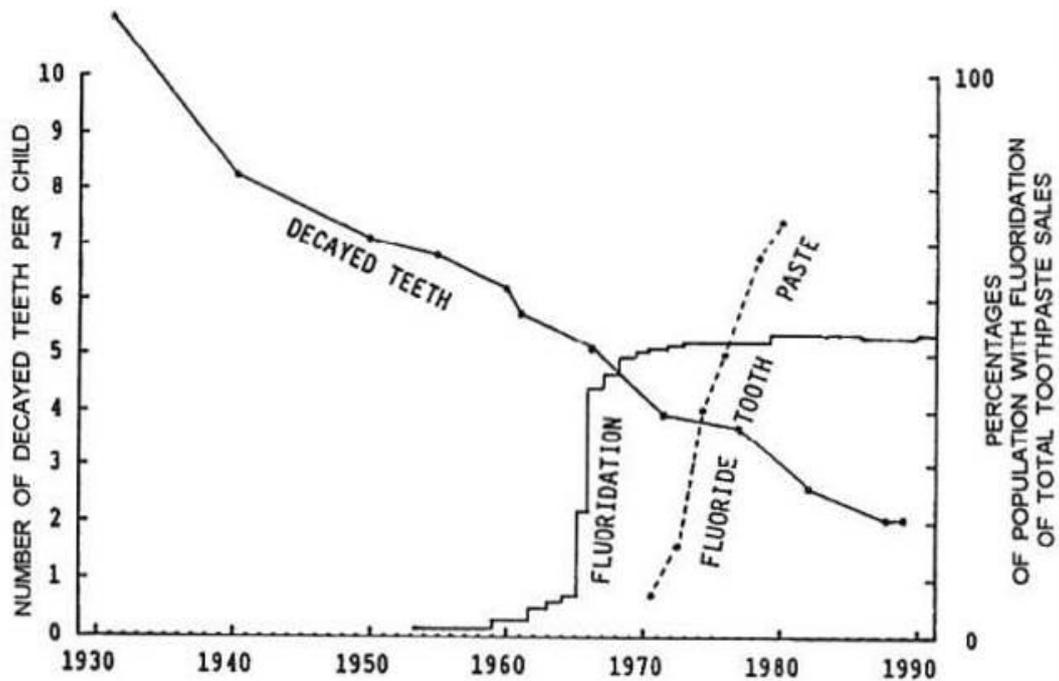
New Zealand clinical trials and mass medication experiments have failed

It is disturbing that New Zealand has allowed clinical trials with the deliberate Fluoride exposure of women up to 10 mg per day in the form of tablets. As expected from prior science these trials were a failure. Quotes: "We conducted a double-blind, placebo-controlled randomized trial over 1 year at an academic research center, in 180 postmenopausal women with osteopenia."

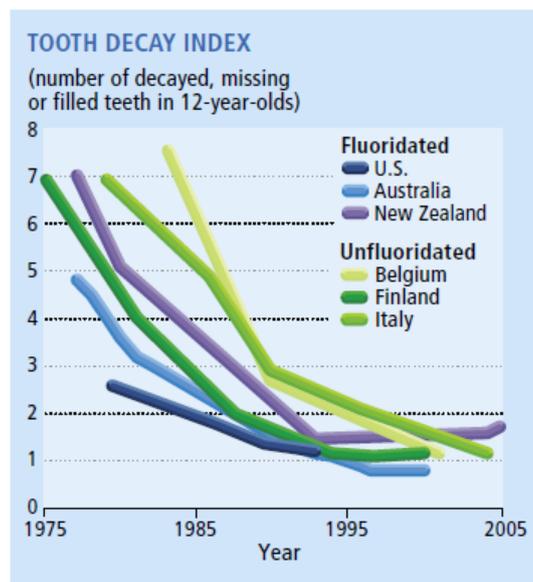
"Low-dose Fluoride does not induce substantial effects on surrogates of skeletal health and is unlikely to be an effective therapy for osteoporosis." [Grey 2013].

Fluoridation does not prevent tooth decay but does damage teeth

New Zealanders are proud of their famous whistleblower, the late Dr J Colquhoun, an eminent scientist who helped destroy the myth that fluoridation reduces tooth decay by revealing the bias and falsification of data from trials [Colquhoun 1990, 1997, 1998; Diesendorf 1997, 1998, State of Wisconsin]. His graph shown below demonstrated that tooth decay had been in decline in New Zealand for decades and the decline was not affected by the introduction of fluoridation or the availability of Fluoride toothpaste.

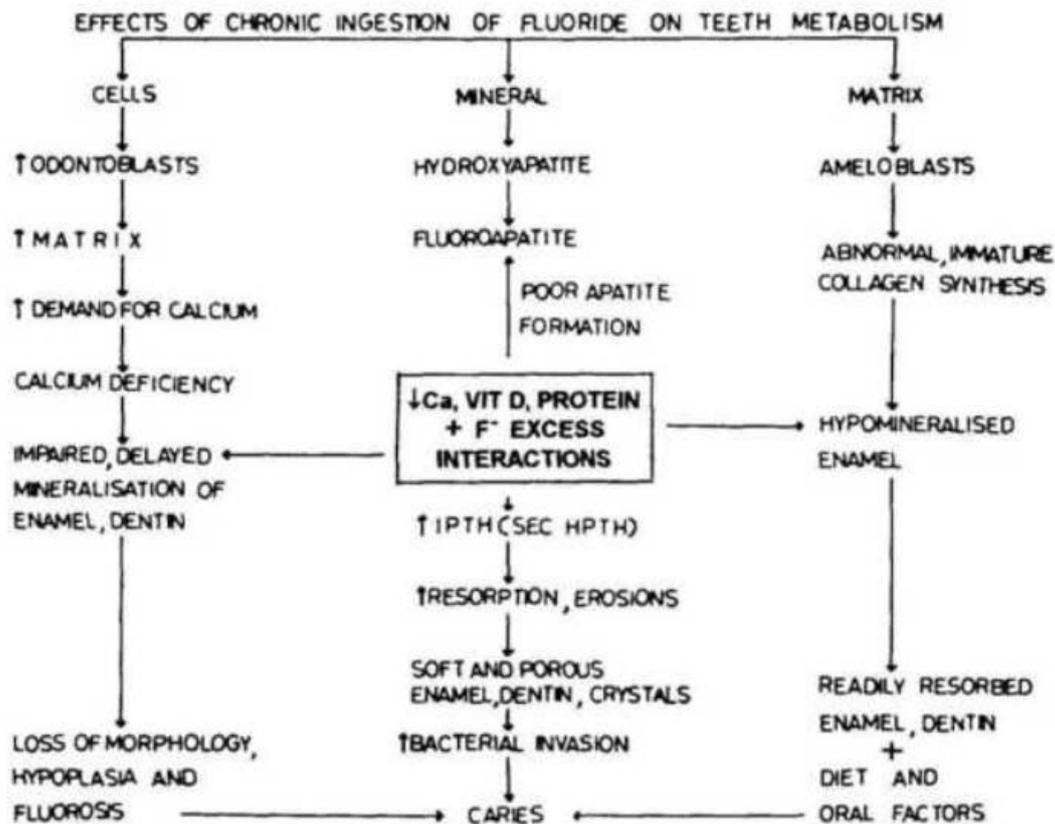


This data has been confirmed continuously over the years and featured in an article in Scientific American [Fagin 2008] which extended the trend to 2005 for New Zealand, and showed that Fluoridation status has no influence on decay rates.



The largest epidemiological study in the history of Fluoride effects on teeth was conducted in India [Teotia 2000]. The scheme below shows how real experts in dental health demonstrate the harm that Fluoride can do to teeth, actually increasing decay rates in some circumstances.

FIGURE 3. Mechanisms underlying the development of dental fluorosis and the evolution of dental caries in children exposed to high intakes of fluoride during the period when enamel is laid down and mineralised (based on nutritional, metabolic and histomorphometric studies)



Using TEM, it has been shown that Fluoride is not incorporated in the tooth enamel of rats who drink fluoridated water at the level of 2 ppm Fluoride and their teeth are in no way superior [Kakei 2012].

Mitsuo Kakei et al.: Misconceptions of Fluoride Schemes

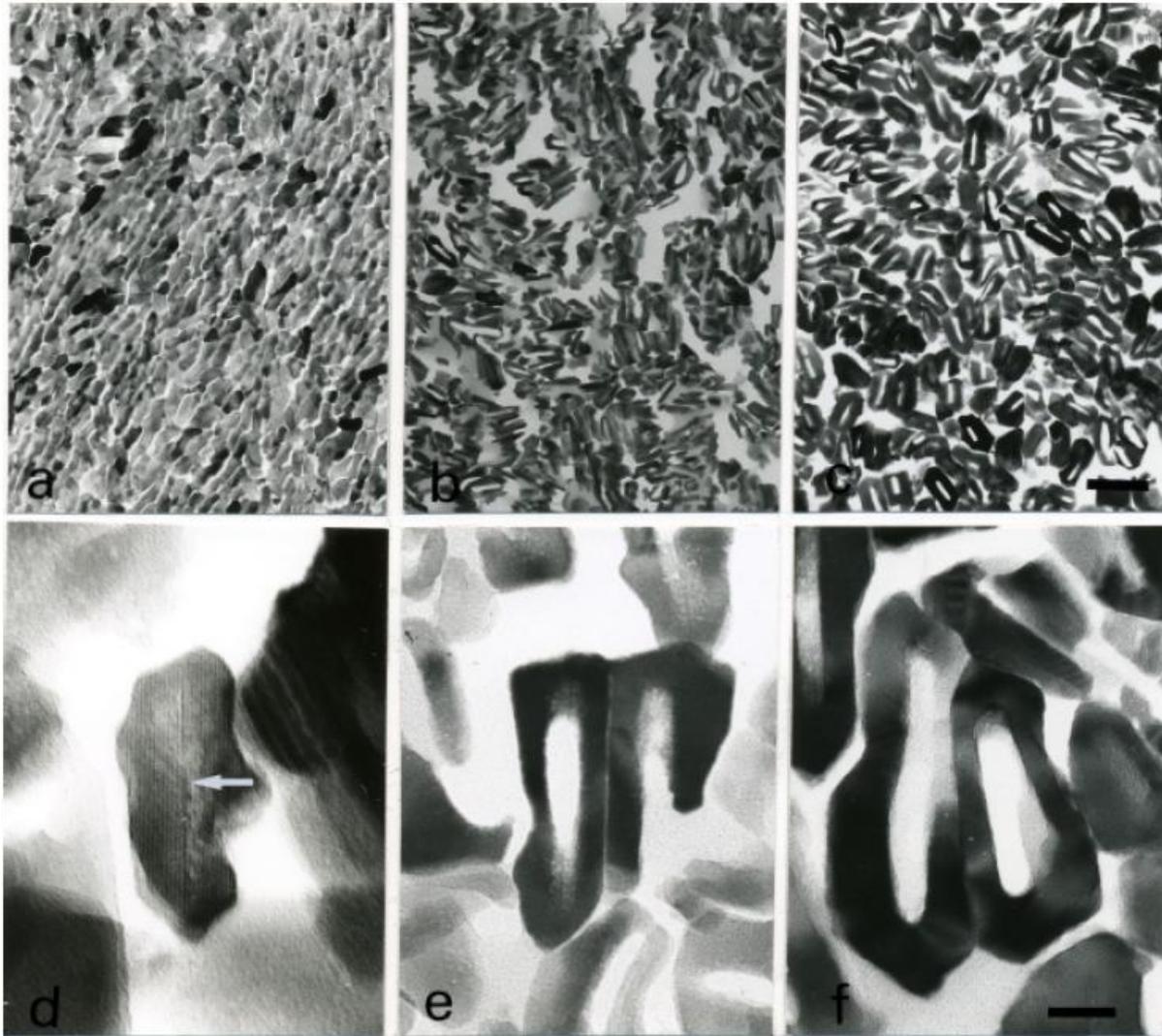


Figure 1: Electron micrographs of cross sections of sound (a and d), carious (b and e) and fluorosed human dental enamels (c and f), and higher magnification of the respective crystals (d-f). The centers of crystals of both fluorosed enamel and carious lesions show less acid resistance than the peripheral area. Arrow indicates the central dark line. a-c, scale bar = 160 nm; d-f, scale bar = 20 nm.

Industrial Waste Fluoride must be immobilized at source to prevent further pollution of New Zealand soil

The following scheme by NZ researchers [Cronin 2000] demonstrates the bio-accumulation of toxic Fluoride in plants and food animals resulting from the use of Fluoride contaminated Phosphate fertilizers. Grazing animals consume soil as well as their food, exacerbating the problem. Much of the Fluoride washes through to groundwater, rivers and lakes. Using groundwater irrigation brings the pollutant back to the surface to further contaminate the environment. Aluminium smelters, brick works, fertilizer plants and volcanoes all contribute to the atmospheric pollution. The deliberate addition of Fluorides as Fracking agents (not considered by the authors) can only make things much worse.

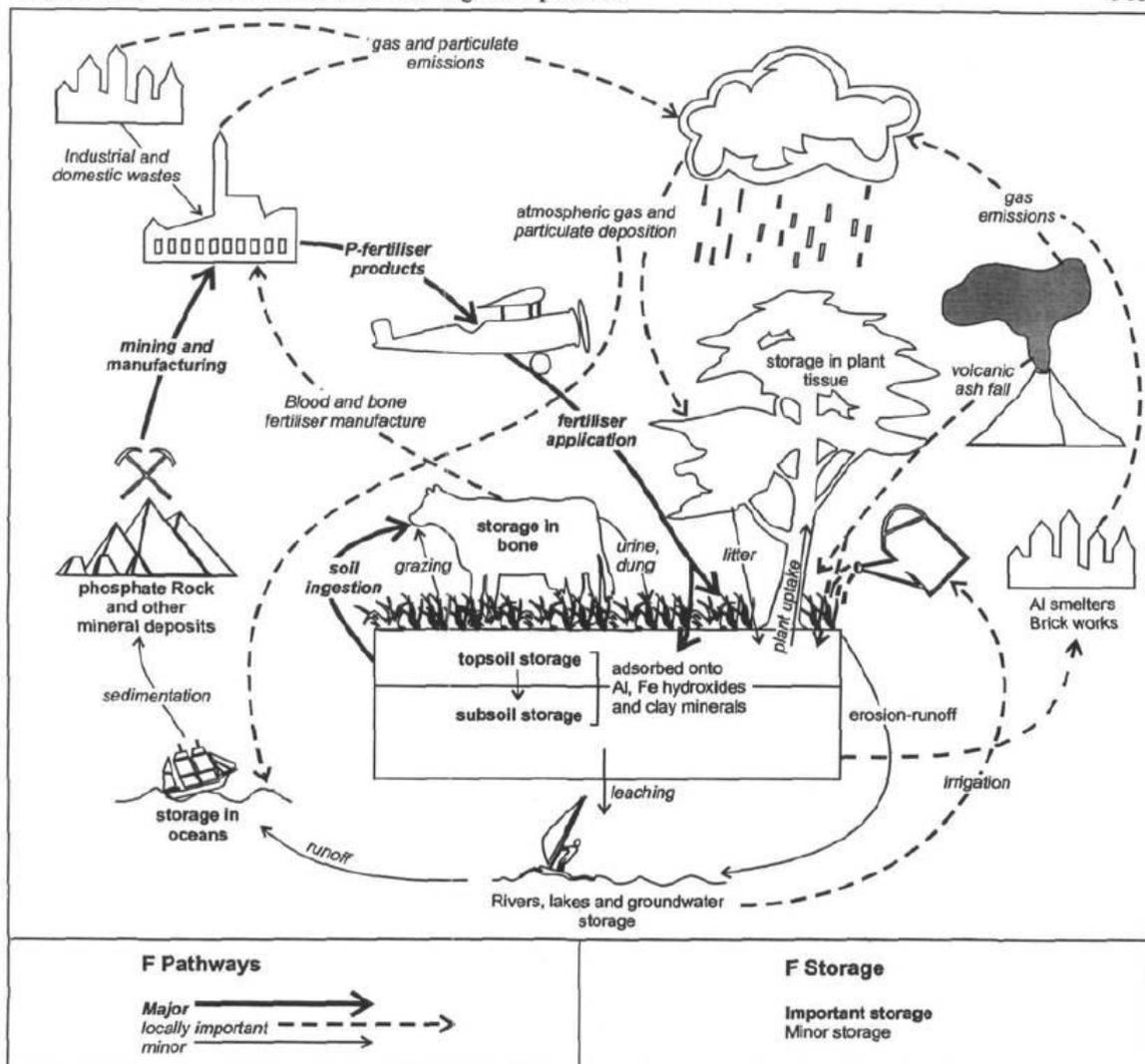
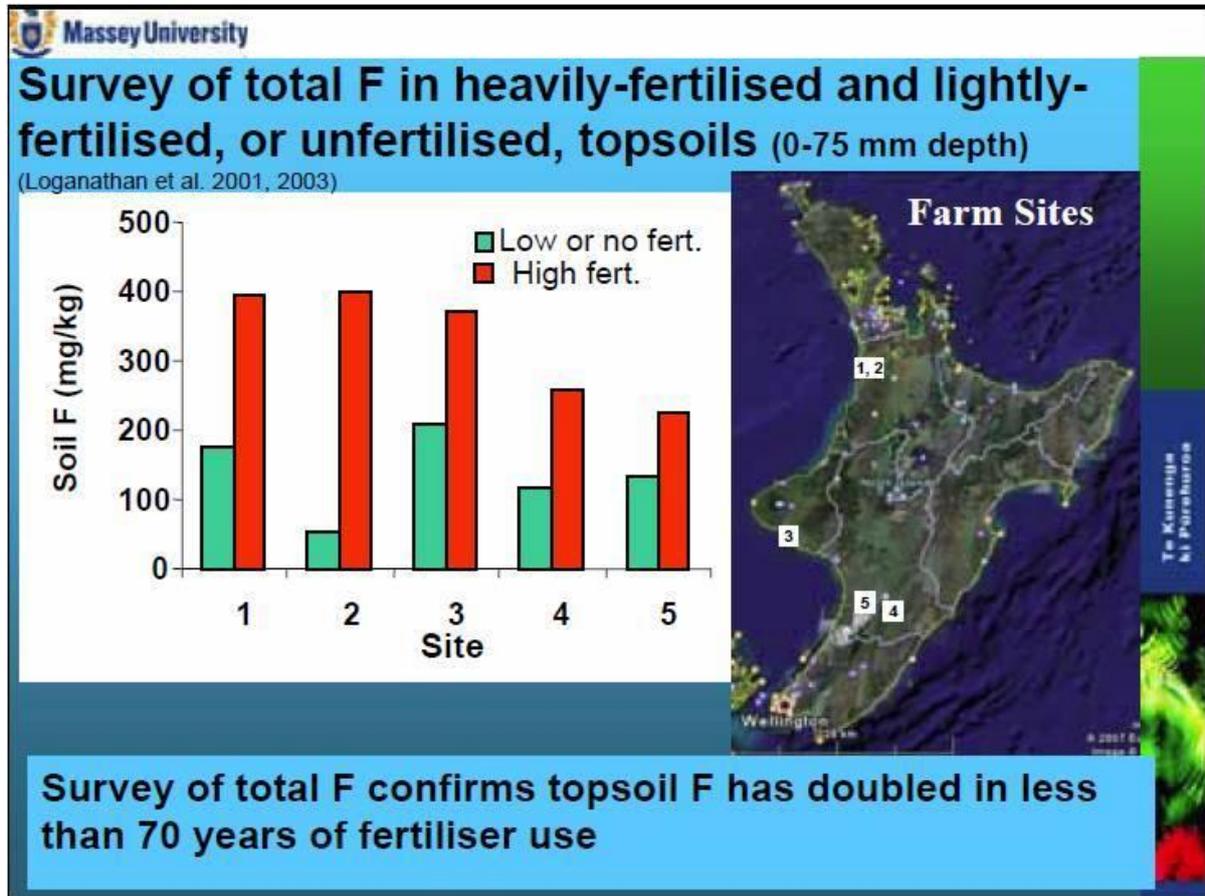


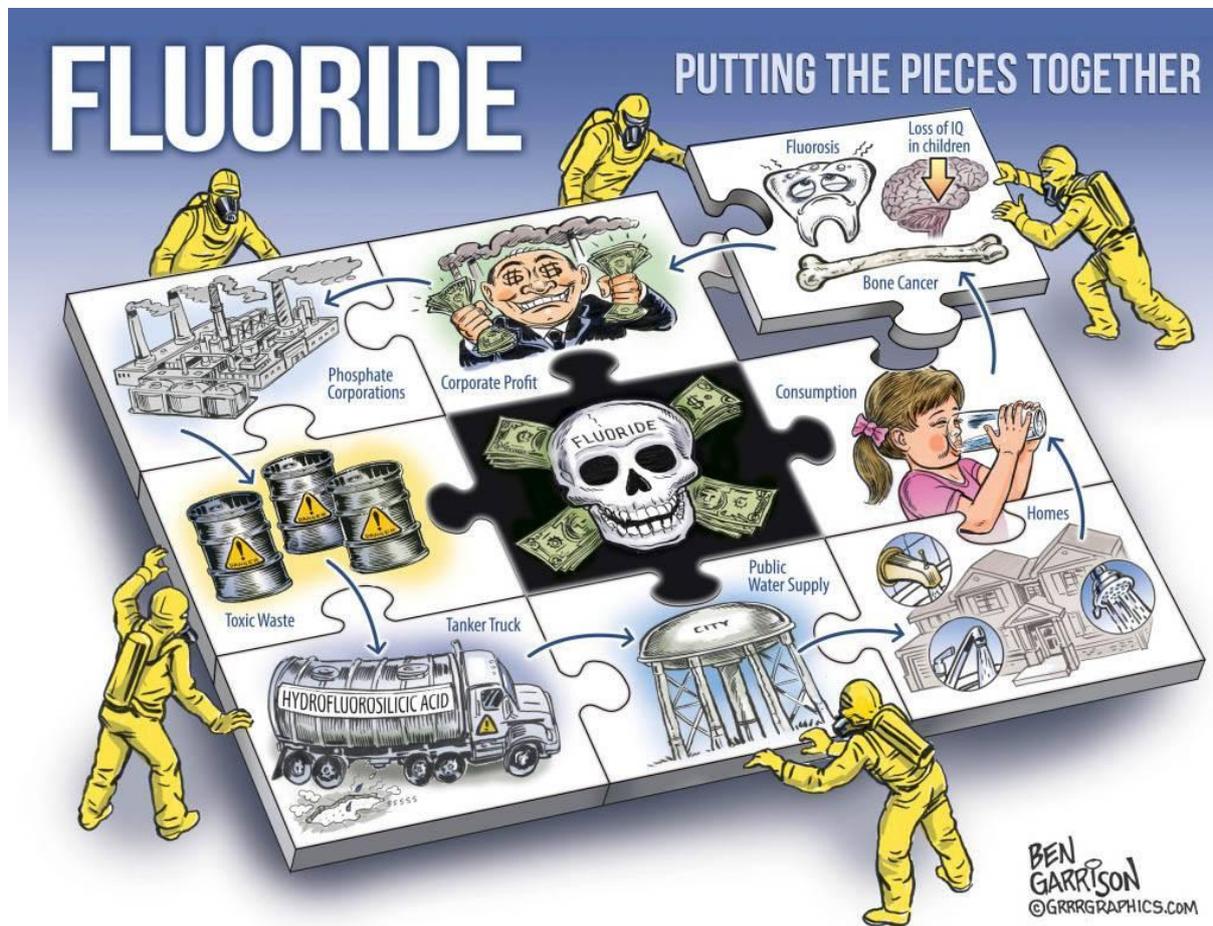
Fig. 1 Cycling of fluoride in grazed pasture systems.

The widespread use of Fluoridated superphosphate has doubled the level of the toxin in New Zealand farmland in less than 70 years.

This has led to stock losses and contamination of crops, with the added risk of enhanced formation of the neurotoxins Fluoroacetate and Fluorocitrate within foods including cereals.



This artwork effectively conveys many of the objections to the public drinking water supplies being deliberately contaminated with industrial Fluoride waste.



Industrial Waste Fluoride delivers other sensitizers and carcinogens to the body

A number of excellent reviews are available. One of the most recent sets out the case for immediate suspension of water fluoridation in the USA [Kennedy 2016].

This is an analysis sheet from the supplier of Sodium Fluorosilicate showing alarming levels of toxic metals contamination in addition to the material itself. These include genotoxic carcinogens with no "safe" level.

HUNAN HEAVEN MATERIALS DEVELOPMENT CO., LTD
 7F HX BLDG, CHEMICAL RESEARCH INSTITUTE, NO. 108 LAODONG ROAD WEST CHANGSHA, HUNAN, CHINA

CERTIFICATE OF ANALYSIS

DATE: 12 MAY, 2014
 NAME OF PRODUCT: Sodium Fluorosilicate Powder
 INVOICE NUMBER: CS130718904
 BATCH NUMBER: 130718904A
 ORDER NUMBER: 14414-4
 QUANTITY: 20MTS
 DATE OF MANUFACTURE: 30 APR, 2014
 EXPIRE DATE: 29 APR, 2015

Items	Standard	Result
Na ₂ SiF ₆ (assay)	98% min	98.85%
Fluorine(F)	59.4% min	59.9%
Moisture	0.5% max	0.41%
Water insoluble matter	0.5% max	0.35%
Antimony	100mg/kg max	95 mg/kg
Arsenic	100mg/kg max	94mg/kg
Barium	100mg/kg max	96 mg/kg
Beryllium	100mg/kg max	97 mg/kg
Cadmium	50 mg/kg max	45mg/kg
Chromium	100mg/kg max	95mg/kg
Copper	100mg/kg max	93 mg/kg
Lead	100mg/kg max	95.8mg/kg
Mercury	20mg/kg max	17.6mg/kg
Nickel	100mg/kg max	94 mg/kg
Selenium	100mg/kg max	95 mg/kg
40 Sieve (0.420mm)	98% min passing	98.6%
325 Sieve (0.044mm)	25% max passing	14.5%

We hereby certify that this lot of material meet the standard.
 Product meets ANSI/AWWA standard B702-11 and is NSF-60 certified.

ANSI / NSF 60

(8M09)

DRINKING WATER TREATMENT ADDITIVES



湖南汉润材料发展有限公司
 Hunan Heaven Materials Development Co., Ltd.

.....
 Authorized Signature

Fluoride exacerbates plumbosolvency, which I have reviewed [Pain 2015d].

Plumbosolvency

The dissolution of Lead from pipes, brass, solder and even PVC by water in the presence of Oxygen.

Fluoride enhances Plumbosolvency by forming complex ions.

**STOP ADDING
FLUORIDATION CHEMICALS
TO MY WATER THAT
LEACH LEAD**



**WAKE UP and read the
science and remember
about acidic corrosives,
your chemistry and about
element #9!**

Why do I have tell you this?

Human rights are paramount

If the New Zealand government takes the decision over fluoridation away from local government, it is moving from self-determination to a fascist dictatorship.

The result will be international condemnation which could well lead to loss of important tourism dollars as well as reputation for a clean and green environment.

It is the inalienable right of every citizen to refuse medical treatment.

Vulnerable groups in society including the unborn must be protected from harm

Tragically New Zealand is allowing some of its university personnel to perpetuate the myth that Fluoride is a nutrient [Brough].

Quote "Estimates of Fluoride intake were lower using the prediction equation than based on extrapolation. The prediction equation suggested inadequate Fluoride intakes for these pregnant women. Both methods suggested that toxicity was not a problem as intakes were below the Upper Level. Further research is required to ascertain if Fluoride intakes in pregnant New Zealand women are adequate."

This statement is extremely dangerous because of the erroneous assumptions upon which it is built. It is sad to see that they don't understand the science that shows most of a woman's daily intake of Fluoride is transmitted to her foetus. Massey University Research Fund should immediately terminate all use of Fluoride on pregnant women.

The figure below shows some New Zealand "supplement tablets". Note very carefully that the manufacturer warns not to give any of their product in areas with more than 0.3 ppm Fluoride in the water, not to give any of the product to children under 3 years and "DO NOT USE DURING PREGNANCY".



FLUORIDATED AT BIRTH

**If you live in a fluoridated country
fluoridation of your baby begins at**

conception.

**75% of the maternal dietary
fluoride intake is passed to the
developing child, where it accumulates in its
developing bones and organs.**



Fluoride causes anaemia during pregnancy, lower birth weight, neurotoxic damage and a host of other risks to the unborn.

Vulnerable groups to Fluoride toxicity include workers in hot environments who drink up to 12 litres of water per day and those exposed to airborne Fluoride emissions such as alumina workers [Donoghue 2011] and those exposed to volcanic emissions [Durand 2005].

The following figure shows experimental proof from Iceland that Fluoride reduces the yield of young lambs [Kristensson 1997].

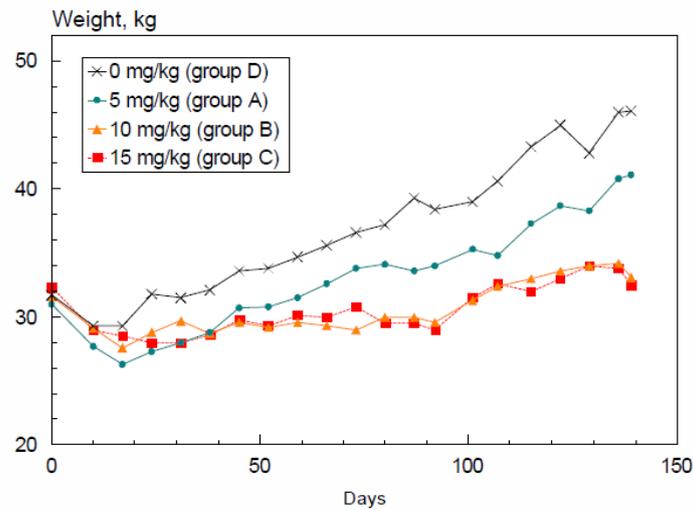


Figure 1. Changes in weight of the lambs during the experiment. Each point on the curve represents the mean weight of the lambs in the respective group.

1. mynd. Breytingar á þyngd lambanna meðan á tilrauninni stóð. Sérhver punktur á ferlinum táknar meðalþyngd lamba í hverjum hópi fyrir sig.

Sydney University Research into damage done by Fluoride to Australian Babies [Arora 2013]

Conclusion: The results suggest that the **Fluoride** concentration of **Australian marketed infant foods and drinks** may be sufficiently high to be **a risk factor for dental Fluorosis**.

Australian Infant Food	Maximum Fluoride Measured	Average Fluoride Measured
Beef	2.8	0.51
Chicken	2.3	0.53
Fish	0.79	0.31
Lamb	1.0	0.66
Vegetarian	2.6	0.80
Breakfast Cereals	1.8	0.42
Desserts	1.3	0.36
Fruits	0.87	0.19
Snack Foods	1.6	0.25
Ready-To-Feed Infant Formula	0.035	0.023
Reconstituted Infant Formula	1.2	0.27
Juices	1.2	0.31
Non-Soy Milks	0.035	0.01
Soy Milks	0.91	0.56

Ceasing Fluoridation is the honourable, clever and economic thing to do

Claims of economic benefit from fluoridation have been shown to be false [Ko 2015].

My New Zealand friends are clever. Every single one of them opposes and sees through the Fluoridation scam.

The current Fluoride review [Australian Government 2015] is absurd - stating for Fluoride that “there is no evidence that the Australian and New Zealand population has any level of deficiency”. And yet they propose to increase the fictional “adequate intake”!!!

It would be sheer lunacy to allow FSANZ and the NHMRC to increase allowable Upper Levels (ULs) of Fluoride intake. The recommendation should be a target of Fluoride intake as low as reasonably achievable.

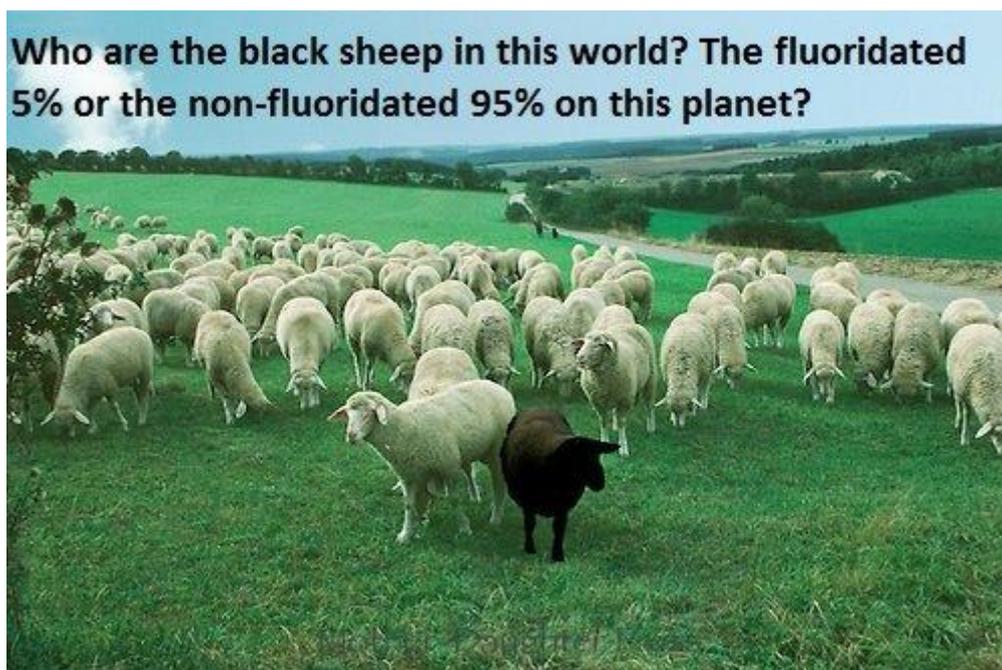
Here are some quotes from the NHMRC re New Zealand:

“NZ has also recently reduced their recommended level for fluoridation from 0.85mg/L to 0.75mg/L.

Attendees queried the changing fluid consumption patterns in Australia and the effect on fluoridation as a public health measure. It was discussed that at this time, we do not have this data for the Australian population. FSANZ did a total diet study (23rd) in 2008, but that was 6 years ago. Food and beverages are 40-60% of total diet intake of Fluoride. And there other inputs of Fluoride.”

“In New Zealand (NZ) there was an increase in fluoridation in 2010 but since this time it has dropped to under 50% (reasons may include choice, cost, risk, ethics etc.)” [NHMRC 2013].

New Zealand should join 95% of humanity who have made the right decision



The perpetrators of the Fluoridation fraud and the Big Lie must not be allowed to claim that Fluoride has any value as a nutrient. The overwhelming evidence of harm demands that the Australian and New Zealand Governments unite with the scientifically literate world and eliminate all pretence by FSANZ and the NHMRC that Fluoride has a place in any nutritional review or has a "Nutrient Reference Value".

In July 1979, Judge John Flaherty, later Chief Justice of the Supreme Court of Pennsylvania, wrote a letter to the Mayor of Auckland New Zealand in which he said:

"In my view, the evidence is quite convincing that the addition of Sodium Fluoride to the public water supply at one part per million is extremely deleterious to the human body, and, a review of the evidence will disclose that there was no convincing evidence to the contrary...

"Prior to hearing this case, I gave the matter of fluoridation little, if any, thought, but I received quite an education, and noted that the proponents of fluoridation do nothing more than try to impune (sic) the objectivity of those who oppose fluoridation." [Hirzy 2000].

References

Those marked with * were deliberately ignored by the NHMRC.

Arora A, Floyd S, Gibson E, Wong D, Heilman J R, Levy S M. 2013. Fluoride content of infant foods and drinks in Australia. 10th World Congress on Preventive Dentistry 2013.

Australian Government. 2015. Department of Health. Methodological framework for the review of Nutrient Reference Values.

Australian Government. Department of Health and Ageing. National Health and Medical Research Council. Nutrient Reference Values for Australia and New Zealand Including Recommended Dietary Intakes. Retrieved from:
www.nhmrc.gov.au/_files_nhmrc/publications/attachments/n35.pdf?q=publications/synopses/_files/n35.pdf

Belgium 2002. Belgian Council for Hygiene scientific opinion.

Bergman Å, Heindel JJ, Jobling S, Kidd KA, Zoeller RT. Editors. 2013. State of the Science of Endocrine Disrupting Chemicals – 2012. An assessment of the state of the science of endocrine disruptors prepared by a group of experts for the United Nations Environment Programme and World Health Organization.

Bian J, Lin X, Yang X, Fan T, Zhu Q. 2010. Changes of certain oxidative, anti-oxidative and vascular function indexes of New Zealand rabbit exposed by high-fluoride. *Wei Sheng Yan Jiu - (Journal of Hygiene Research)* 39(6):751-4.

Brough L, Jin Y, Coad J, Weber JL, Thomson JA, Kim N. 2015. Fluoride intakes in pregnant women in Palmerston North, New Zealand (307). Oral Presentation Joint Annual Scientific Meeting of the Nutrition Society of NZ and the Nutrition Society of Australia.

Choi AL, Zhang Y, Sun G, Bellinger DC, Wang K, Yang XJ, Li JS, Zheng Fug QY, Grandjean P. 2015. Association of lifetime exposure to fluoride and cognitive functions in Chinese children: A pilot study. *Neurotoxicology and Teratology* 47:96–101.

Colquhoun J. 1990. Flawed foundation: a re-examination of the scientific basis for a dental benefit from fluoridation. *Community Health Studies* 14(3):288-296.

Colquhoun J, Wilson B. 1999. The lost control and other mysteries: further revelations on New Zealand's fluoridation trial. *Accountability in Research* 6(4):373-394.

Colquhoun J. 1997. Why I changed my mind about water fluoridation. *Perspect Biol Med* 41(1):29-44.

Connett E, Connett P. 2002. Submission to the ATSDR.

Connett P, Beck J, Micklem HS. 2010. *The Case Against Fluoride, How Toxic Waste Ended up in our Drinking Water and the Bad Science and Politics that Keep it There*. Chelsea Green Publishing, White River Junction, VT, USA.

Connett P, et al. 2017. Fluoride Action Network database. www.fluoridealert.org.

Cressey P. 2010. Dietary fluoride intake for fully formula-fed infants in New Zealand: impact of formula and water fluoride. *Journal of Public Health Dentistry* October 70(4):285-91.

Cressey P, Gaw S, Love J. 2010. Estimated dietary fluoride intake for New Zealanders. *Journal of Public Health Dentistry* 70(4):327-36.

Cronin SJ, Manoharan V, Hedley MJ, Loganathan P. 2000. Fluoride: A review of its fate, bioavailability, and risks of fluorosis in grazed-pasture systems in New Zealand. *New Zealand Journal of Agricultural Research* 43(3):295-321.

Cronin SJ, Neall VE, Lecointre JA, Hedley MJ, Loganathan P. 2003. Environmental Hazards of Fluoride in Volcanic Ash: A Case Study from Ruapehu Volcano, New Zealand. *J Volcanol Geotherm Res* 121:295–321. doi:10.1016/S0377-0273(02)00465-1

*Cutress TW, Coote GE, Shu M, Pearce EI. 1996. Fluoride content of the enamel and dentine of human premolars prior to and following the introduction of fluoridation in New Zealand. *Caries Research* 30(3):204-212.

Deal JR. 2015. National Sanitation Foundation Sham FDA – Fraudulent Certifier of Fluoridation Materials. Available from Research Gate.

* de Liefde B. 1998. The decline of caries in New Zealand over the past 40 years. *New Zealand Dental Journal* 94(417):109-113.

Diesendorf M. 1990. The health hazards of fluoridation: a re-examination. *International Clinical Nutrition Review* 10(2):304-321.

Diesendorf M, Colquhoun J, Spittle BJ, Everingham DN, Clutterbuck FW. 1997. New evidence on fluoridation. *Australian and New Zealand J. Public Health*. 21:187-190.

* Diesendorf M, Colquhoun J, Spittle B. 1998. Fluoridation and bones: Authors' response to critics [2]. *Australian and New Zealand Journal of Public Health* 22(1):165-167.

Diesendorf M. 2006. *Fluoridation: Unsafe, Ineffective and Unethical*. Skeptic Winter edition. pp. 61-63, 68.

Do LG, Levy SM, Spencer AJ. 2011. Association between infant formula feeding and dental fluorosis and caries in Australian children. *Journal of Public Health Dentistry* 1-10.

Donoghue AM, Frisch N, Ison M, Walpole G, Capil R, Curl C, Di Corleto R, Hanna B, Robson R, Viljoen D. 2011. Occupational asthma in the aluminum smelters of Australia and New Zealand: 1991-2006. *American Journal of Industrial Medicine* 54(3):224-31.

*Durand M, Florkowski C, George P, Walmsley T, Weinstein P. 2005. Effect of volcanic gas exposure on urine, blood, and serum chemistry. *New Zealand Medical Journal* 118:9.

*Durham G. 1997. Review of evidence on fluoridation. *Australian and New Zealand Journal of Public Health* 21(5):548

* Durward C, Thou T. 1997 Dental caries and sugar-containing liquid medicines for children in New Zealand. *New Zealand Dental Journal* 93(414):124-129.

EFSA Panel on Dietetic Products, Nutrition and Allergies 2013: Carlo Agostoni, Roberto Berni Canani, Susan Fairweather-Tait, Marina Heinonen, Hannu Korhonen, Sébastien La Vieille, Rosangela Marchelli, Ambroise Martin, Androniki Naska, Monika Neuhäuser-Berthold, Grażyna Nowicka, Yolanda Sanz, Alfonso Siani, Anders Sjödin, Martin Stern, Sean (J.J.) Strain, Inge Tetens, Daniel Tomé, Dominique Turck and Hans Verhagen. Scientific opinion on Dietary Reference Values for Fluoride. *EFSA Journal* 11(8):3332

Evans RW, Beck DJ, Brown RH, Silva PA. 1984. Relationship between fluoridation and socioeconomic status on dental caries experience in 5-year-old New Zealand children. *Community Dentistry and Oral Epidemiology* 12:5–9.

Fagin D. 2008. Second thoughts about Fluoride. *Scientific American* January:74-81.

FSANZ. 2009. Food standards Australia New Zealand. Final assessment report. Application A588. Voluntary addition of fluoride to packaged water. 6 May 2009. Retrieved from: www.health.sa.gov.au/pehs/fluoridation/FluoridationBottledWaterFinal-FSANZ.pdf

FSANZ. 2011. Food standards Australia New Zealand. Fluoride in bottled water (last updated November 2011). Retrieved from: www.foodstandards.gov.au/scienceandeducation/factsheets/factsheets/fluorideinbottledwat5362.cfm

FSANZ. 2012. Food Standards Australia and New Zealand. The 23rd Australian Total Diet Study.

Gerety EL, Lawrence EM, Wason J, Yan H, Hilborne S, Buscombe J, Cheow HK, Shaw AS, Bird N, Fife K, Heard S, Lomas DJ, Matakidou A, Soloviev D, Eisen T, Gallagher FA. 2015. Prospective study evaluating the sensitivity of ¹⁸F-NaF PET/CT for detecting skeletal metastases from renal cell carcinoma in comparison to multidetector CT and ^{99m}Tc-MDP bone scintigraphy, using an adaptive trial design. *Annals of Oncology* 26(10):2113-8.

Goodall CM, Foster FH, Fraser J. 1980. Fluoridation and cancer mortality in New Zealand. *NZ Med J* 92:164-167

Grey A, Garg S, Dray M, Purvis L, Horne A, Callon K, Gamble G, Bolland M, Reid IR, Cundy T. 2013. Low-dose Fluoride in Postmenopausal Women: A Randomized Controlled Trial. *The Journal of Clinical Endocrinology & Metabolism*. 98(6):2301-2307.

Harland CW, Donaldson L, Simpson J, Wansbrough H. Hydrofluorosilicic acid and Water fluoridation. NZ Institute of Chemistry 2002.

Harvey JM. 1952. Chronic Endemic Fluorosis of Merino Sheep in Queensland. *The Queensland Journal of Agricultural Science* 9(2):47-141.

* Herbison, P. 1997. Need for evidence about fluoridation. *Australian and New Zealand Journal of Public Health* 21(3):344-345.

Hirzy JW. 2000. Statement of Dr. J. William Hirzy, National Treasury Employees Union Chapter 280 Before the Subcommittee on Wildlife, Fisheries and Drinking Water. United States Senate June 29

IAOMT. International Association of Oral Medicine and Toxicology. 2003. Policy position on ingested fluoride and fluoridation.

* Jackman, P. 1997. Evidence on fluoridation. *Australian and New Zealand Journal of Public Health* 21(3):346.

Jamel H, Plasschaert A, Sheiham A. 2004. Dental caries experience and availability of sugars in Iraqi children before and after the United Nations sanction. *International Dental Journal* 54:21-25.

Takei M, Sakae T, Yoshikawa M. 2012. Aspects Regarding Fluoride Treatment for Reinforcement and Remineralization of Apatite Crystals. *Journal of Hard Tissue Biology* 21(3):257-266.

Takei M, Yoshikawa M, Mishima H. 2016. Fluoride Exposure may accelerate the Osteoporotic Change in Post-Menopausal Women: Animal Model of Fluoride-induced Osteoporosis. *Adv Tech in Biol Med* 4:1

Kennedy D. 2015. personal communication.

Kennedy D, Seneff S, Davidson RM, Oller Jr JW, Haley BE, Masters RD. 2016. Environmental Toxicants and Infant Mortality in the USA. *Peertechz J Biol Res Dev* 1(1): 036-061. <https://www.peertechz.com/articles/environmental-toxicants-and-infant-mortality-in-the-usa.pdf>

Ko L, Thiessen K. 2015. A critique of recent economic evaluations of community water fluoridation. *International Journal of Occupational and Environmental Health* 21:91-120.

Kristensson J, Gunnaeson E, Johannesson P, Palsson PA, Pormar H. 1997. Experimental fluoride poisoning in Icelandic sheep. *ICEL AGR SCI* 11:107-112.

Li S, Smith KD, Davis JH, Gordon PB, Breaker RR, Strobel SA. 2013. Eukaryotic resistance to fluoride toxicity mediated by a widespread family of fluoride export proteins. *Proceedings of the National Academy of Sciences*. 110(47):19018-19023.

Lovering EM. 1963. Consumer Inquiries Section, USFDA to N.M. Wellesley, Mass. 8/15/63

MacArthur JD. 2015. Fluoride, Premature Birth and Impaired Neurodevelopment

*Mackay TD, Thomson WM. 2005. Enamel defects and dental caries among Southland children. *New Zealand Dental Journal* 101(2):35-43.

Mahon WAJ. 1964. Fluorine in the natural thermal waters of New Zealand. *N Z J Sci* 7:3–28.

Malin A, Till C. 2015. Exposure to fluoridated water and attention deficit hyperactivity disorder prevalence. *Environmental Health* 14:17.

Marshall TA et al. 2004. Associations between Intakes of Fluoride from Beverages during Infancy and Dental Fluorosis of Primary Teeth. *Journal of the American College of Nutrition* 23:108-16.

Maurer and Day. 1957. The Non-Essentiality of Fluoride in Nutrition. *Journal of Nutrition*, 62: 561-573.

McDonald SP, Russ GR. 2003. Current incidence, treatment patterns and outcome of end-stage renal disease among indigenous groups in Australia and New Zealand. *Nephrology* 8: 42–48.

Needham, B. 2010. Killer Smile. Report to Minister for Health and Human Services. Water Fluoridation and Ill Health of at Risk Groups in the Tasmanian Population in 2010.

National Research Council. 1993. Health Effects of Ingested Fluoride. National Academy Press, Washington DC. p. 30.

NHMRC 2007 Part B. Excluded Studies. 355 pages.

NHMRC Expert Meeting – Water Fluoridation Workshop Outcome Notes 20 Jun 2013.

Pain GN. 2015a. Fluoride doped Hydroxyapatite in Soft Tissues and Cancer – A Literature Review. Available from Research Gate.
https://www.researchgate.net/publication/272421380_Fluoride_doped_hydroxyapatite_in_soft_tissues_and_cancer_A_literature_review

Pain GN. 2015b. Fluoride Causes Diabetes. Available from Research Gate.
https://www.researchgate.net/publication/273442062_Fluoride_Causes_Diabetes

Pain GN. 2015c. NHMRC = Politics, Not Science. Australians Victims of Dangerous Fluoridation Experiments. Available from Research Gate.
https://www.researchgate.net/publication/272622984_NHMRC_Politics_Not_Science_Australians_-_Victims_of_Tragic_Fluoridation_Experiments

Pain GN. 2015d. Plumbosolvency exacerbated by Water Fluoridation. Available from Research Gate.
https://www.researchgate.net/publication/282439972_Plumbosolvency_exacerbated_by_Water_Fluoridation

Pain GN. 2015e.

https://www.researchgate.net/publication/285771633_Fluoride_is_a_bio-accumulative_endocrine_disrupting_neurotoxic_carcinogen_-_not_a_nutrient

Pain GN. 2016.

https://www.researchgate.net/publication/293593658_Fluoride_causes_Heart_Disease_Stroke_and_Sudden_Death

Pain GN. 2017a. Mechanisms of Fluoride Neurotoxicity. Available from Research Gate.

https://www.researchgate.net/publication/312057754_Mechanisms_of_Fluoride_Neurotoxicity_A_quick_guide_to_the_literature

Pain GN. 2017b. Fluoride is a developmental Nephrotoxin – coming to a Kidney near you. Available from Research Gate.

https://www.researchgate.net/publication/313025968_Fluoride_is_a_developmental_Nephrotoxin_-_coming_to_a_Kidney_near_you

*Pearce E. 1998. Plaque minerals and dental caries. New Zealand Dental Journal 94(415):12-15.

*Pearce EI. 1999. Prophylactic mineral enrichment of approximal dental plaque. New Zealand Dental Journal 95(419):4-6.

Peckham S, Awofeso N. 2014. Water Fluoridation: A Critical Review of the Physiological Effects of Ingested Fluoride as a Public Health Intervention. The Scientific World Journal. Article ID 293019

Peckham, S. Lowery, D. and S Spencer. 2015. Are fluoride levels in drinking water associated with hypothyroidism prevalence in England? A large observational study of GP practice data and fluoride levels in drinking water. J Epidemiol Community Health. pp 1-6.

Queensland Government Workplace Health and Safety. 2015. Fluoride health monitoring guidelines.

Rhone-Poulenc Inc. 1971. Initial submission: Toxicology lab report in fluosilicic acid with cover letter dated 10/27/92. TSCATS [Unpublished Health and Safety Studies submitted to EPA]. Microfiche No. OTS055557. Chemical Information System NISC Record I.D. TS-00052941.

*Roddick A. 2004. Fluoride and oral health. The New Zealand Dental Journal 100(3):61.

Sauerheber R. 2013. Physiologic Conditions Affect Toxicity of Ingested Industrial Fluoride. Journal of Environmental and Public Health Volume 2013

Saul AW. 2012. Dispensing with Fluoride. Orthomolecular Medicine News Service 7 May Editorial.

Shaw SD, Bishop PJ, Harvey C, Berger L, Skerratt LF, Callon K, Watson M, Potter J, Jakob-Hoff R, Gould M, Kunzmann N, West P, Speare R. 2012. Fluorosis as a probable factor in metabolic bone disease in captive New Zealand native frogs (Leiopelma species). Journal of Zoo and Wildlife Medicine 43(3):549-65.

SCHER. 2011. The Scientific Committee on Health and Environmental Risks. Critical review of any new evidence on the hazard profile, health effects, and human exposure to fluoride and the fluoridating agents of drinking water.

Sheiham A, WPT. 2014. A reappraisal of the quantitative relationship between sugar intake and dental caries: the need for new criteria for developing goals for sugar intake. *BMC Public Health* 14:863.

*Short LM, Riordan PJ. 1996 It's their right not to fluoridate, but is it right? *Australian and New Zealand Journal of Public Health* 20(6):563.

* Shu M. 1998. Study of root caries in an artificial mouth. *New Zealand Dental Journal* 94(416):62-64.

Spittle B. 1993. Allergy and Hypersensitivity to Fluoride. *Fluoride*. 26:267-273.

Spittle B. Fluoride fatigue. Revised 3rd printing. Dunedin, New Zealand: Paua Press; 2008. Available from: <http://www.pauapress.com/fluoride/files/1418.pdf>

Stanton, R. 2015. personal communication.

State Of Wisconsin Circuit Court Fond Du Lac County Safe Water Association, Inc., Plaintiff, vs. City Of Fond Du Lac, Defendant. Affidavit of Dr. John Colquhoun in support of Motion for Summary Judgment.

Stewart DJ, Manley TR, White DA, Harrison DL, Stringer EA. 1974. Natural Fluorine Levels in the Bluff Area, New Zealand. 1. Concentration in Wildlife and Domestic Animals. *New Zealand Journal of Science* 17:105-113.

Stockbridge RB, Kolmakova-Partensky L, Shane T, Koide A, Koide S, Miller C, Newstead S. 2015. Crystal structures of a double-barrelled fluoride ion channel. *Nature*, 525:548-551.

Sutton M, Kiersey R, Farragher L, Long J. 2015. Health effects of water fluoridation.

Teotia M, Teotia SP, Singh KP. 1998. Endemic chronic fluoride toxicity and dietary calcium deficiency interaction syndromes of metabolic bone disease and deformities in India. Year 2000. *Indian J Pediatr* 65 (3):371-81.

Thiessen KM, Limeback H, Beck J, Micklem HS, Litras S, Spittle B, Atkin GM. 2014. Scientific and Critical Analysis of the 2014 New Zealand Fluoridation Report. International Critique of the Royal Society of New Zealand/Office of the Prime Minister's Chief Science Advisor's Fluoridation Report: Health effects of water fluoridation: A review of the scientific evidence. Fluoride Free New Zealand. Accessed from www.fluoridefree.org.nz

*Treasure ET. 1996. The effect of fluoridation on populations in New Zealand. *Community Dentistry and Oral Epidemiology* 24(3):230.

* Tukuitonga C, Hughes F. 2002. Ministry assures fluoridation safety and effectiveness. *Nursing New Zealand (Wellington, N.Z.)* 8(10):5.

Turner JC, Solly SRB, Mol-Krijnen CM, Shanks V. 1978. Organochloride, Fluorine and Heavy Metal Levels in Some Birds from New Zealand Estuaries. *New Zealand Journal of Science* 21:99-102

U.S. Food and Drug Administration. 2006. Health Claim Notification for Fluoridated Water and Reduced Risk of Dental Caries. Center for Food Safety and Applied Nutrition. Office of Nutritional Products, Labeling, and Dietary Supplements. October 14, 2006

USPHS. 1966. Department of Health, Education and Welfare. Letter signed by Robert W Bonds.

Vandenberg LN, Colborn T, Hayes TB, Heindel JJ, Jacobs DR, Lee DH, Shioda T, Soto AM, vom Saal FS, Welshons WV, Zoeller RT, Myers JP. 2012. Hormones and endocrine-disrupting chemicals: Low dose effects and nonmonotonic dose responses. *Endocrine Reviews* 33(3):378-455.

Verkerk R. 2010. The paradox of overlapping micronutrient risks and benefits obligates risk/benefit analysis. *Toxicology* 278(1):27–38

*Webb PM, Donald K. 1997. Evidence on fluoridation. *Australian and New Zealand Journal of Public Health* 21(3):345-346.

Weiss RL, Trithart AH. 1960. Between meal eating habits and dental caries experience in preschool children. *American Journal of Public Health* 50:1097-1104.

WHO. World Health Organization 2014. Regional Assessment Report. Chemicals of Public Health Concern and their management in the African Region.

* Will R, Stonell L, Gan S, Ma D, et al. 1998. Bone histomorphometry in patients treated with corticosteroids and APD or APD and sodium fluoride. [abstract]", *Australian & New Zealand Journal of Medicine* 28:748.

Wilson G H III et al. 2014. An Approach to Breast Cancer Diagnosis via PET Imaging of Microcalcifications Using ¹⁸F-NaF. *The Journal of Nuclear Medicine* 7:1138-1143.

* Wright JC, Bates MN, Cutress T, Lee M. 2001. The cost-effectiveness of fluoridating water supplies in New Zealand. *Australian and New Zealand Journal of Public Health* 25(2):170-177.

Xiang Q, et al. 2003. Effect of fluoride in drinking water on children's intelligence. *Fluoride* 36: 84-94.

Yazahmeidi B, Holman, DJ. 2007. A survey of suppression of public health information by Australian governments. *Aust N Z J Public Health*. 31(5):51-7.

