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To: Mayor Clr. Michael Britten, Deputy Mayor Clr. Liz Seckold and Councillors,
Bega Valley Shire Council
P.O. Box 492, Bega NSW 2550.
64992200

19th November 2015

Dear Clr. Michael Britten, Clr. Liz Seckold, Clr. Tony Allen, Clr. Russell Fitzpatrick, Clr. Bill Keith Hughes, Clr. Ann Mawhinney, Clr. Kristy McBain, Clr. Sharon Tapscott and Clr. Bill Taylor.

RE: Fluoridation of the Bega Valley Shire Water Supplies

For the last twelve years I have worked as a general dentist in both public and private practice in rural, regional and city areas. My clinical observations are that there is no difference in the dental health of people who have grown up and lived in areas of non-fluoridated water supplies compared with those in areas of fluoridated water supplies.

However, I have observed a higher incidence of fluorosis in those children who have grown up in areas with fluoridated water supplies.

Fluorosis is the term used to describe a condition that occurs when too much fluoride has been ingested whilst tooth enamel is being developed in the foetus and early childhood years, causing distortion to the crystal structure of the enamel.

This results in less mineralised tooth structure, which makes the affected teeth more vulnerable to decay, sensitivity, fracture and tooth discolouration. The degree of fluorosis depends on the extent of fluoride exposure and ranges from mild – moderate - severe.

It is important to make clear that fluorosis is not a cosmetic problem. It is one sign of fluoride ingestion or absorption which shows damage to body tissues. The visible fluorosis effect seen on tooth structure, does not mean it is an isolated incident in the body. From ingestion and absorption, it also affects other body tissue and physiological events like the hormone pathways and enzyme function.

Professor Trevor Sheldon, Chair of the 2000 British York university Review of Fluoridation wrote to the House of Lords in 2002 stating: “.....the review did not show water fluoridation was safe.... The review found fluoridation to be associated with high levels of Dental Fluorosis which was not characterised just as a cosmetic concern”.



Accurate Photos of Enamel Fluorosis





The instigation of fluoridating water supplies came about during a time when dental education and preventive dentistry improved dramatically across developed countries. Oral hygiene practice (the invention of a plastic toothbrush) and understanding of nutritional influences were dramatically improved around the same time as water fluoridation. In my opinion (thanks to a successful campaign on water fluoridation) it became difficult to discern the difference between the effects of water fluoridation, good nutrition and basic oral hygiene practice.

Many people attribute good dental health to the innovation of water fluoridation, when in fact there were and still are other factors strongly influencing good dental health.

Ideal dental health is not a result of fluoride exposure. It is dependant on a multitude of factors: In particular the type of bacteria that inhabits (colonises) the mouth from birth. It is now well appreciated that the type of colonisation (commensal bacteria) plays a huge role in whether a person is more or less vulnerable to decay and or gum disease. Another factor that determines dental health is the constitution of saliva and degree of saliva flow, and whether the person is medically or immune compromised.

Nutrition and genetics also play huge roles as to whether a person develops and maintains healthy tooth structure. Lastly regular oral hygiene, the action of brushing and flossing (at least brushing) teeth regularly every day before sleep will most certainly influence the status of dental health.

Dental health is definitely not improved by water fluoridation.

The Scientific American 2008 journal published a study showing no difference with the number of tooth decay index between fluoridated and non fluoridated countries. This finding was further confirmed by the World Health Organisation data in 2012. Furthermore, the U.S. Centre of Disease Control and Prevention stated in 1999 and 2001 that the main benefit of fluoride results from topical application (applied directly to the tooth) not systemic (ingested or absorbed).

Fluorine is the most highly reactive element in the halogen group. It reacts to form many compounds, one commonly known as sodium fluoride (salt) which dissociates in water into

fluoride ions. There is actually a formula to ascertain an ingested fatal dose and toxic dose. Eg., If a toddler ingests a full tube of adult toothpaste, they will die. Dentistry students are taught this at university and anyone who appreciates chemistry understands the full ramifications of fluorine and fluoride's toxicity.

Fluoride is fantastic at killing bacteria (good and bad bacteria) and when applied topically it is very good at instigating or accelerating the remineralisation of tooth structure with the presence of calcium and phosphate (Nb. calcium and phosphate need to be present for remineralisation to occur).

This, in my opinion, is the only way in which it should be used in dentistry. When used topically (applied directly onto tooth structure) via toothpaste or some other form, it will certainly help clean teeth and encourage remineralisation of tooth structure with the presence of calcium and phosphate, but more importantly the dosage and concentration of it can be controlled and specified for individual use.

Water fluoridation does not allow for dose and concentration control, which is very dangerous and can result in reduced health especially to those most vulnerable. Even a healthy athlete can be at risk of ingesting excessive amounts of fluoride, simply by drinking more than the recommended daily intake of fluoridated water, on a regular basis to rehydrate from their athletic activity.

The following list (highlighted in bold) summarises some of the scientifically validated studies that prove there are detrimental health effects in populations living and drinking fluoridated water supplies:

1) **Highly significant IQ level drop in children drinking fluoridated water as compared to those without fluoridated water.** A study called "Developmental Fluoride Neurotoxicity: A Systematic Review and Meta- Analysis" by Choi, A. L. et al., 2012., Harvard University showed that only modestly elevated fluoride levels can create serious cognitive impairment (an average decrease of 7 IQ points). There is no doubt that fluoride is an established neurotoxin. Lowering IQ levels has significant consequences on society, as it reduces the number of highly intelligent people and increases the number of mentally handicapped. With **36 human studies linking fluoride exposure to lowering of I.Q.**, it is no wonder that countries other than Australia either have already or are planning to cease their water fluoridation programs.

2) **Decreased formation of brain cells** in unborn (aborted) fetuses in those of fluoridated compared to non fluoridated areas. The Centre for Disease Control USA says **unborn babies can be neurologically damaged** because fluoride crosses the placenta from the mother's blood to the developing foetus.

3) **Enzyme function inhibition or impairment.** Ingesting fluoride reduces the activity of important digestive enzymes, resulting in reduced nutritional absorption and reduced immune function and less defence against toxins.

4) **Renal (kidney) disruption.** Those individuals or children with kidney impairment (known or unknown) will have a lower margin of safety for fluoride intake – their fluoride retention may be up to three times normal (NHMRC Australian Drinking Water Guidelines 2011).

5) **Skeletal, neuronal (nerves/ brain cells), hepatic (liver) and connective tissue impairment.**

6) Those with enamel fluorosis showed **decreased elasticity of the aorta and left ventricle of the heart** - a cause for cardiac arrest or on going heart disease.

7) Impacts have been shown to also **affect thyroid function** by inhibiting the deiodinase enzymes and interference with intracellular signals of hormone function (USA National Research Council 2006).

8) **In the presence of trace amounts of aluminium, fluoride can disrupt hormone pathways** and has been associated with **thyroid problems as well as enable the absorption of aluminium into brain tissue** (aluminium in brain tissue is associated with Alzheimer's disease).

9) **Increased exposure of absorbed fluoride accumulates** not only in the kidneys but also **in the pineal gland**, which aside from the kidney has the highest blood flow per unit volume. **Fluoride in the pineal gland affects melatonin production which leads to altered timing of events in the body eg. sexual maturity, delayed tooth eruption and calcium metabolism.**

10) Just as fluorosis can occur in teeth, it will also occur in the skeleton. Often there is a misdiagnosis of arthritis with **skeletal fluorosis, which is a highly debilitating and painful condition.**

11) **Infants who ingest formula made with fluoridated water are exposed to a higher than acceptable daily intake level of fluoride**, which puts their general health, IQ and physiological development at significant risk. Breast milk contains 0.004 parts per million of fluoride. **Infant formula made with tap water fluoridated at 1ppm (1mg/L) delivers over 200 times more fluoride than breast milk.**

12) The **USA Dental Association in 2006 said: Baby formula made with fluoridated water is no longer considered safe** as it poses a serious health risks such as dental fluorosis (which is not just a cosmetic issue).

Further important issues which government and councillors should understand when considering to fluoridate water supplies, are listed below:

1) Dose and concentration cannot be controlled.

The 2000 Nobel Prize winner in Medicine, Dr Arvid Carlsson said "Fluoridation is against all principles of modern pharmacology. It's really obsolete".

When the fluoridated water exits from the tap in the person's house, office, school, shower, bath, sporting facility, cafe or restaurant, there is no way of controlling how much is actually used (absorbed or ingested).

Regardless of the weather, the activity the person is doing, the person's medical status or age, **all people will have no choice and no way of controlling how much fluoride they are ingesting or absorbing when it exits the tap.**

2) The use of fluoride in the water to target people's dental health via a systemic route is an act of mass medication.

Mass medication - tarnishing everyone in the population or community with the same brush, **is immoral and unethical.** Especially for those who are most vulnerable to the toxic effects of fluoride such as infants, medically compromised and elderly people.

3) The fact that the public are not being warned about the potential health risks and are not given informed consent about ingesting fluoride, is also unethical and an immoral practice.

4) Independent studies between 1986 – 2009, have proven there is no significant difference in number of decayed surfaces of teeth between fluoridated and non- fluoridated water supplies.

5) Countries including Switzerland, Germany and Israel **are now stopping or have already ceased to continue water fluoridation** due to the very real adverse health risks associated with it. Four modern studies conducted in Finland, East Germany, Cuba and British Columbia showed that tooth decay rates did not increase when fluoridation of water was stopped.

6) Ingested fluoride is not easy for the body to excrete. In a typical healthy person only 50% is removed from the body via the kidneys. It is therefore **an accumulative toxin in a person's body**, and found to be deposited in other body tissues as the years of a person's life pass by.

The fact that ingested fluoride is difficult to excrete in a healthy adult, there is no wonder that young children and people who are medically compromised are most at risk of acquiring neurotoxicity.

7) What is the final destination of fluoridated water? The Earth, our planet, is a closed system. Our environment: The rivers, lakes, oceans and soil are all 'building blocks' or sources for our food and not immune from what is put into the water supplies. Produce and agriculture grown on our lands should be protected, as much as possible, from the infiltration of pollutants

such as fluoride. Otherwise there will be further cumulative effects of fluoride consumption and consequent ill health.

8) The ingestion of fluoridated water is not limited by drinking. **It is also absorbed via the skin when cleaning your body** in the shower and bath. Further making it difficult to control dose and concentration.

9) **Fluoride in the water supplies encourages the corrosion and dissolution of lead soldering in old plumbing pipes, increasing the amount of lead in the water** as it flows through the pipes and exits out of the tap.

10) **The type of fluoride compounds used to fluoridated water supplies come from the industrial waste (pollutants) of phosphate fertiliser and aluminium manufacturing, which contain heavy metal contaminants such as arsenic, lead, mercury and aluminium.** I am strongly opposed to the economy of disposing manufacturers' toxic waste product by selling or giving it to government to fluoridate water supplies, under the flawed guise of health promotion, in order to avoid their own expenses of safe disposal.

Dr William Hirzy gave his testimony on Fluoridation, for the U.S. Senate Committee on Environment and Public works, June 2000. He states, "if this stuff (fluoride) gets out into the air, it's a pollutant, if it gets into the river, it's a pollutant, if it's gets into the lake, it's a pollutant, but if it goes right into your drinking water system, it's not a pollutant. That's amazing!!"

Water fluoridation does not provide better oral health. Other factors as mentioned, brushing teeth, good bacteria, nutrition, genetics, and topical application of fluoride in the presence of calcium and phosphate (found in saliva) will have a far greater impact on dental health than any systemic ingestion. Dr Hardy Limeback, professor of Preventive Dentistry Toronto University says "more money is now being spent in Canada treating dental fluorosis from water fluoridation, than treating tooth decay".

As mentioned above, water fluoridation has undergone vigorous assessment and critique over the years since its implementation. However it must not be forgotten that 95% of the world population do not fluoridate their drinking water and yet have similar tooth decay to heavily fluoridated countries (World Health Organisation Data 2012), ie., no difference: Therefore it is not deemed as an effective method to achieve dental health or prevent decay.

Absence of knowledge does not make it safe. Not knowing all the potential adverse health and environmental risks and even what is known should be reason itself to not use fluoride in the form of water fluoridation.

We should aim to nurture and nourish our community with good health, education, peace and harmony. We should not burden our community with unnecessary methods of flawed health promotion that have clearly been superseded by better understanding

and education. Dental health promotion via mass medication in the form of water fluoridation is violating basic human rights. It is an immoral and an unethical practice to force a known toxin or drug (fluoride compounds) into an essential utility such as a water supply. A person, regardless of their disposition, should have the right to drink and use clean water with minimal as possible contaminants, ensuring their safety and well-being.

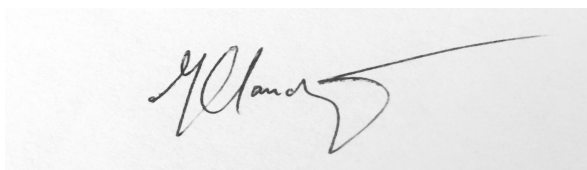
Have the councillors and administrative staff responsible for the mass medication of the water supply considered the fact that a class action may be taken by the constituents, who without their consent have been forced to ingest and absorb fluoridated water and believe it is contributing or a cause of damage to their health?

This form of mass medication (water fluoridation) is inexcusable and certainly not tolerated by any person well informed about the issues stated in this letter. I request that you take all necessary measures to re-evaluate the momentum and agendas pushing this archaic methodology. I strongly recommend that council take action to ensure it is not liable for permitting such an ineffective methodology with the associated consequences of ill health, without the consent of its constituents.

Council is meant to ensure the safety and protection of its constituents, not facilitate (unknowingly or not) ill health. The potential health hazards of excessive fluoride consumption will create more cost and pose greater demand on the medical system. One cannot control dosage through fluoridation of water supplies, it is not a correct, safe nor effective method of dental health promotion.

I strongly advise against any form of water fluoridation.

Yours Truthfully,

A handwritten signature in black ink, appearing to read 'M. Claudianos', with a long horizontal stroke extending to the right.

Dr Maria Claudianos BDS. Adel.

Further References not cited above:

The National Research Council, “Fluoride in Drinking Water, *A Science Review of EPA’s Standards.*” The National Academies Press Washington, D.C. 2006.

Connett, Paul. PhD, Beck, James. PhD, Micklem, H.S. DPhil., “The Case Against Fluoride” Chelsea Green Publishing, White River Junction, Vermont. 2010.

