



15 March 2011

Dear Councillor

National Fluoridation Information Service

I am writing to you to introduce the National Fluoridation Information Service. Regional Public Health is leading a consortium of partners: Environmental Science and Research, Centre for Public Health Research at Massey University and National Poisons Centre who together will soon be launching the National Fluoridation Information Service (NFIS).

NFIS is an information and advisory service which will support District Health Boards and Territorial Local Authorities by providing robust and independent scientific and technical information, advice and critical commentary around water fluoridation.

There is ongoing research and monitoring around the world looking at the effectiveness and safety of water fluoridation programmes. In part NFIS has been established to monitor this work and to provide advice on these public health programmes in New Zealand.

This letter provides information about water fluoridation in New Zealand. This includes a table listing common concerns with evidence based responses.

Water Fluoridation in New Zealand

New Zealand water supplies contain naturally occurring fluoride, but at levels too low to help protect our teeth from decay. Water fluoridation involves adding a small amount of fluoride to achieve an optimal level: high enough to reduce tooth decay, but low enough to minimise the risk of adverse effects. In New Zealand, the Ministry of Health recommends that the fluoride content for drinking water should be between 0.7 milligram/litre and 1.0 milligram/litre, with a maximum level of 1.5 milligram/litre. This is based on advice from the World Health Organisation (WHO) and the National Drinking-Water Standards Review Expert Working Group¹.

Recently in the United States (US), the Department of Health and Human Services has proposed a change to the US recommended water fluoride concentration range of 0.7 – 1.2 mg/L to a single fluoride concentration of 0.7 mg/L. The New Zealand recommended range for optimally fluoridated water has been 0.7 – 1 mg/L for nearly two decades. The current US proposal was based on 3 reports. The National Fluoridation Information Service consortium partners are currently assessing these reports with respect to their relevance to New Zealand and we will be providing advice to the Ministry of Health. We will certainly advise you of any new conclusions.

¹ National Drinking-Water Standards Review Expert Working Group. Drinking Water Standards for New Zealand 1995. Wellington: Ministry of Health, 1995.

Common Concerns Raised	Evidence-Based Response
<ul style="list-style-type: none"> Water fluoridation does not prevent tooth decay. The assertion is based mostly on reworking data from studies that demonstrate the benefit of water fluoridation and then discrediting the studies or using routinely collected figures that at times show little difference if the group numbers are very small or competing effects have not been controlled properly. 	<ul style="list-style-type: none"> There is good evidence that water fluoridation reduces tooth decay. International evidence has found that water fluoridation increases the number of children without tooth decay by about 15%. A number of recent international reviews continue to show benefit although they have also pointed out that some of the studies could have used stronger scientific designs. NZ evidence has found that water fluoridation reduces the frequency and severity of tooth decay by over 30%. Greatest benefit is shown for Māori, Pacific, and socio-economically deprived children.
<ul style="list-style-type: none"> Fluoride is a chronic poison-dental fluorosis is proof of this. Dental fluorosis is the tooth mottling that can occur if too much fluoride is consumed by children when teeth are forming. The presence of any form of dental fluorosis is evidence of poisoning by fluoride. 	<ul style="list-style-type: none"> Dental fluorosis is a spectrum. In very mild or mild fluorosis, there are white marks on teeth which are minimal, harmless, and sometimes even desirable. In severe fluorosis, teeth can be pitted or stained. Despite over 50 years of water fluoridation in New Zealand, moderate and severe dental fluorosis is very uncommon and the New Zealand studies show no difference in the levels between children in fluoridated and non-fluoridated areas. Rates of mild fluorosis have not changed over the last 25 years. Significant risk of dental fluorosis is unlikely with our drinking water fluoride levels in New Zealand.
<ul style="list-style-type: none"> Infant formula made with fluoridated water may be harmful to babies. Modelling shows that some infants who are solely bottle-fed may exceed existing upper limits for daily fluoride intake. Bottle-fed infants are at risk of developing dental fluorosis. 	<ul style="list-style-type: none"> This is only a theoretical risk. The upper limit for daily intake is very conservative. If there is a problem there would be an epidemic of the more severe forms of dental fluorosis. We do not see this in New Zealand or in other countries with water fluoridation.

	<ul style="list-style-type: none"> This concern has been investigated by the Ministry of Health and the Food Safety Authority of Australia and New Zealand (FSANZ). Both have confirmed that there is no safety concern in making up infant formula with fluoridated water.
<ul style="list-style-type: none"> Water fluoridation can affect brain function and can reduce IQ. Some studies from rural China where water supplies have extremely high levels of naturally occurring fluoride, suggest that residents living in these areas have lower IQ. 	<ul style="list-style-type: none"> This possible association is not at all conclusive. The studies are not relevant to New Zealand. The drinking water in the areas studied had fluoride levels many times greater than the maximum permitted level in New Zealand.
<ul style="list-style-type: none"> Water fluoridation can cause bone cancer. Patients with osteosarcoma (a form of bone cancer) have higher levels of fluoride in their blood. Males who are exposed to fluoride in drinking water as children have a higher risk of osteosarcoma. 	<ul style="list-style-type: none"> There are major methodological flaws in the two main studies. The effect of water fluoridation on osteosarcoma cannot be reliably predicted but the majority of studies do not show a positive relationship. This particular cancer is also difficult to study: it is so rare that among boys aged 10-19 years in a 4000-person community, there would be one case every 400-900 years.
<ul style="list-style-type: none"> Water fluoridation causes a range of negative health effects on bones/joints and hormonal systems. 	<ul style="list-style-type: none"> There is no evidence anywhere in the world that water fluoridation causes these illnesses. Any associations are tenuous even for areas in the world with very high levels of naturally occurring fluoride in drinking water.
<ul style="list-style-type: none"> Water fluoridation is mass medication and violates our freedom to choose. 	<ul style="list-style-type: none"> It is generally accepted by the legal bodies that have tested this in New Zealand and internationally that fluoride added to drinking water is not a medicine or drug. It is a prevention strategy for populations. It is like iodine added to salt to help prevent goitre, or vitamins and minerals added to many foods for health benefits.
<ul style="list-style-type: none"> Water fluoridation is toxic and fluoride is a waste product of the fertiliser industry. Fluoride may be released from industry processes. 	<ul style="list-style-type: none"> The fluoride used for water fluoridation in New Zealand is either manufactured locally or sourced from overseas. It must meet very strict quality and purity standards.

Further information on water fluoridation

Please contact your local Medical Officers of Health or Dental Officers in your District Health Board for further information and advice around water fluoridation and child dental statistics in your region.

Additional information on water fluoridation can be found on the websites below.

- Ministry of Health: www.moh.govt.nz/fluoride
- Australian Dental Association Fluoride information: www.fluoridenow.com.au/
- Food Standards Australia New Zealand:
www.foodstandards.gov.au/scienceandeducation/factsheets/factsheets2009/voluntaryadditionoff4392.cfm
- Scientific Committee on Health and Environmental Risks (SCHER), European Commission:
www.ec.europa.eu/health/scientific_committees/consultations/public_consultations/scher_cons_05_en.htm
- Regional Public Health:
www.huttvalleydhb.org.nz/RPH/Resource.aspx?ID=1755

Kind Regards



Peter Gush
Service Manager

cc: Service Managers, Public Health Units
Medical Officers of Health