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MO: H/08/10048

Mr Dave Evans
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Dear Mr Evans

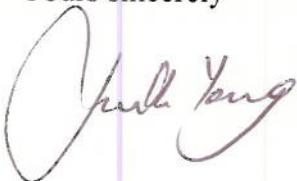
Thank you for your email dated 24 November 2008, addressed to the Honourable Stephen Robertson MP, Minister for Health, regarding the Government's decision to introduce the fluoridation of public drinking water supplies in Queensland.

I note the concerns you have raised and can assure you that the safety and effectiveness of water fluoridation has been frequently re-evaluated, and the weight of evidence consistently shows that fluoridated water is safe.

Queensland Health's ongoing investment in the provision of quality oral health services will be enhanced by the introduction of water fluoridation as a key preventative measure. Research has demonstrated that fluoridation – together with oral hygiene and good nutrition – can reduce tooth decay by up to 40%. There is extensive scientific evidence which shows that fluoridation is a safe and effective means of improving oral health, thereby reducing the considerable personal and financial burden of oral disease.

I have enclosed a community information sheet that provides some additional information on water fluoridation. You may also wish to refer to the Australian Dental Association's website at <http://www.fluoridenow.com.au>.

Yours sincerely



Dr Jeannette Young
Chief Health Officer

6 /03/09

Water Fluoridation

Introduction

Water fluoridation helps protect teeth against decay in people of all ages, from the very young to the elderly. Water fluoridation is a fair way of delivering the benefits of fluoride to the community, regardless of an individual's age, education, income or motivation. Water fluoridation provides an additional benefit in decay prevention to that provided by fluoride toothpaste.¹

Tooth decay occurs when acid, produced by sugar-eating bacteria, destroys the outer surface of the tooth. Fluoride acts like a constant repair kit by neutralising the effect of acids that cause decay as well as repairing damage before it becomes permanent.² Fluoride also repairs damage as it washes over teeth during eating and drinking. Fluoride also works by helping to strengthen the mineral structure of developing teeth.

Water fluoridation is the adjustment of the fluoride level in drinking water in order to help protect teeth against decay. Adding fluoride does not alter the taste or smell of water. In Queensland, drinking water is being fluoridated within the range of 0.6 to 0.8 ppm (parts per million) depending on location and climate. This is within the range recommended by the National Health and Medical Research Council.² As a comparison, the amount of fluoride in children's toothpaste is 400–500 ppm and 1,000 ppm in regular toothpaste.

Fluoride is a naturally occurring compound found in rocks, sea water and at very low levels in almost all sources of fresh water. Naturally occurring forms of fluoride do not readily dissolve in water and consequently they would have a very limited effect on the prevention of dental caries. To overcome this limitation, other safe forms of fluoride are used, which dissolve more fully, to ensure the beneficial effects of water fluoridation are realised. Most commercially supplied fluoride compounds are produced from phosphate rock following extraction of phosphate.

1. Evidence that fluoride works

Numerous studies and reviews have confirmed the effectiveness of water fluoridation. A recent study has found children aged 5 to 12 years and who have lived their whole life in Townsville (which has been fluoridated since 1964) have 45 per cent less tooth decay than Brisbane children³, who are only now beginning to receive the benefits of fluoridation.

2. The importance of preventing tooth decay

It is important to look after your teeth throughout life as good dental health has a direct impact on overall health. Severe tooth decay can affect a person's general health by impacting self-esteem, social interaction and the ability to eat and chew. In children, if baby teeth are lost too early because of decay, their adult teeth may not develop in the correct position creating dental complications later in life.

3. Adding fluoride to drinking water safely

There are a number of regulatory requirements to ensure safe fluoridation in Queensland. These include the *Water Fluoridation Act 2008*, the *Water Fluoridation Regulation 2008* and the *Public Health Regulation 2005*. The Queensland Fluoridation Code of Practice also provides detailed guidance for drinking water suppliers to ensure that fluoride is added safely to drinking water supplies. Many checks and balances are built into fluoridation plants to ensure that fluoride is always supplied at a safe concentration.

4. National and international support

Water fluoridation is supported by many national and international organisations including: the World Health Organization, World Health Assembly, World Dental Federation, Australia's National Health and Medical Research Council, Australian Dental Association, Australian Medical Association and Public Health Association of Australia. In November 2007, the NHMRC completed a review of the latest scientific evidence

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in relation to fluoride and health. Based on this the NHMRC recommends artificial fluoridation of water as the most effective community measure to protect the population from tooth decay.⁴

5. Fluoride around the world

New Zealand, Hong Kong, Singapore, the United Kingdom, Ireland, Canada, the United States and Israel all have fluoride added to their drinking water supplies to help protect against dental caries. Due to differing technical, practical, legal or financial reasons other countries such as Switzerland supplement salt with fluoride.

6. Dental fluorosis

Dental fluorosis is a condition that can sometimes occur if young children get too much fluoride. It usually appears as very fine white lines or flecks on the teeth. It does not affect the function of teeth. Dental fluorosis is the only potential adverse effect of water fluoridation and cannot develop after teeth are fully formed.^{2,5}

7. Infant formula

Breastfeeding is recommended for all infants under 12 months of age as an "unequalled way of providing ideal food for the healthy growth and development of infants."⁶

If an infant is not breastfed, then infant formula can be safely reconstituted with fluoridated water provided the powder itself is not high in fluoride. In Australia, infant formula with high fluoride content must carry a warning label about dental fluorosis.⁷ Most of the infant formulas available in Australia now have very low levels of fluoride.⁸

8. Allergic reactions

Fluoride is an inevitable component of all diets. The addition of fluoride to drinking water is an increase in the fluoride being consumed by individuals. Individuals who believe that their symptoms are related to fluoridated water are essentially claiming an effect from an incremental increase of fluoride, not its presence versus its absence.³

Melbourne's drinking water has been fluoridated since 1977 and according to academic clinicians from the Department of Allergy, Immunology and Respiratory Medicine at Melbourne's Alfred Hospital, no clinical or scientific evidence exists to confirm fluoridation causes allergies or affects

immunity at the optimal 1ppm. Specifically, they state: "... during the past 25 years, whether in Melbourne or in the UK, we have never seen a patient with any respiratory symptoms nor any allergy-like symptoms that could be attributed to fluoride 1ppm [1mg/L] as in our fluoridated water."¹

9. Kidney disease

Kidney Health Australia is Australia's leading organisation promoting kidney health. The organisation recommends water as the fluid of choice to satisfy thirst and has stated: "There is no evidence that consumption of optimally fluoridated water poses any health risks to people with chronic kidney disease, although only limited studies addressing this issue are available."⁹ It is important to note that Kidney Health Australia has not called for the cessation of water fluoridation.

10. Cancer

Scientific studies from around the world have failed to demonstrate a link between water fluoridation and any type of cancer. An Australian review in 2008 found there is a significant body of evidence demonstrating that the consumption of optimally fluoridated water is not associated with cancer risk.¹⁰

11. Thyroid disease

Medical specialists confirm there is no credible evidence of a link between water fluoridation and thyroid disease, stating "...there is no scientifically acceptable evidence that fluoridation increases the incidence of thyroid disease."¹¹

12. Water filters

Water in its natural and treated form can contain many different chemicals, including fluoride. If someone wishes to avoid drinking fluoridated water in the home they have options such as drinking rainwater from a well managed rainwater tank, bottled water that does not contain fluoride, or treating their own tap water using a reverse osmosis water filter or distillation unit. Most low cost home water filters do not remove fluoride. However, Queensland Health maintains that fluoridated tap water is still the healthiest choice for drinking. Queensland Health will not be providing subsidies for water filters to remove fluoride from drinking water.

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General Oral Health

The use of fluorides is just one way to improve the oral health of Queenslanders. Water fluoridation gives extra protection against tooth decay but a healthy diet, regular brushing and flossing and regular dental check-ups are essential for good oral health.

References and further information

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3. Slade GD, Spencer AJ, Davies MJ, Stewart JF. *Caries experience among children in fluoridated Townsville and unfluoridated Brisbane*. Australian and New Zealand Journal of Public Health 1996;20 (6):623–629.
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9. Kidney Health Australia, 2008a. 'The risks of consumption of fluoridated water for people with chronic kidney disease—position statement.' Available from the Kidney Health Australia website: <http://www.kidney.org.au>
10. Stewart, B. (2008). Banding carcinogenic risks in developed countries: A procedural basis for qualitative assessment. *Mutation Research/Reviews in Mutation Research*, 658 (1-2), 124-151.
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Further fluoridation resources can be found at the following website

<http://www.health.qld.gov.au/fluoride>

Queensland fluoridation legislation can be accessed at <http://www.legislation.qld.gov.au/>

The Queensland Water Fluoridation Code of Practice can be downloaded from

http://www.health.qld.gov.au/ph/documents/ehu/fluoride_codepractice.pdf

Queensland Health would like to acknowledge the contribution of the Victorian Department of Human Services to this Queensland Health Fact Sheet