

1 Policy statement

The purpose of this document is to provide a set of principles to guide the use of fluorides in Queensland.

2 Introduction

- 2.1 In October 2005, the Australian Research Centre for Population Oral Health (ARCPOH) led a review of the use of fluorides in Australia. The review process included more than 30 experts, university, jurisdictional and peak-body representatives from all states and territories of Australia.
- 2.2 This review was a short term Action of *Australia's National Oral Health Plan 2004–2013* (AHMC, 2004). The review considered the nature and distribution of tooth decay and dental fluorosis and the nature and distribution of fluoride use (or exposure) in Australia. In identifying a new set of guidelines for the use of fluoride in Australia the experts considered both the benefit of tooth decay prevention and the risk of dental fluorosis.
- 2.3 *The use of fluorides in Australia: guidelines* was published in the Australian Dental Journal in mid 2006.ⁱ The guidelines reflect consensus of expert opinion, and have considered previous Australian reports and research conducted in Australia and overseas.
- 2.4 The Queensland Health, Oral Health Advisory Committee has reviewed the *The use of fluorides in Australia: guidelines* and endorses their recommendations as background for this policy.
- 2.5 In December 2007, the Queensland Government announced the mandatory fluoridation of all eligible public water supplies by 2013. This includes all water treatment plants which serve populations greater than 1000 persons, if the natural fluoride levels are below the optimal fluoride levels prescribed in the Regulation.ⁱⁱ
- 2.6 In March 2008, Queensland Parliament endorsed the new *Water Fluoridation Act 2008* to repeal and replace the current *Fluoridation of Public Water Supplies Act 1963*. The new Act requires the mandatory fluoridation of certain public water supplies and will commence on a date to be fixed by proclamation.
- 2.7 A new regulation will also be prepared to replace the current *Fluoridation of Public Water Supplies Regulation*.
- 2.8 Where references for the government's positions presented in this policy are related to documents other than the *The use of fluorides in Australia-guidelines*, they will be included as endnotes.

3 Background

- 3.1 There is overwhelming scientific evidence to support water fluoridation as a safe and effective public health measure to prevent tooth decay (dental caries) in both children and adults.ⁱⁱ
- 3.2 Water fluoridation has been safely and effectively provided to the population in all other states and territories in Australia for between 30 and 50 years.
- 3.3 The National Health and Medical Research Council states that *“fluoridation of drinking water remains the most effective and socially equitable means of achieving community-wide exposure to the caries prevention effects of fluoride. It recommends that water be fluoridated in the target range of 0.6 to 1.1 mg/L, depending on climate, to balance reduction of dental caries and occurrence of dental fluorosis.”*ⁱⁱⁱ
- 3.4 The Queensland Government spends more on public oral health services than any other Australian state or territory government.
- 3.5 The Queensland Government decided to implement mandatory fluoridation of public water supplies in December 2007. This will take Queensland from 5% fluoridation coverage up to 95% by the end of 2013.
- 3.6 Water fluoridation provides an additional benefit in decay prevention to that provided by fluoride toothpaste.
- 3.7 The widespread use of fluoride toothpaste has been a major factor in the reduction of tooth decay since the late 1960's. However, when used on very young children, adult strength fluoride toothpaste (1000 parts per million fluoride) is also associated with a higher risk of developing dental fluorosis. To reduce this risk, low fluoride toothpaste (0.5 mg/g fluoride) should be used for children up to 6 years of age.
- 3.8 In contrast to the evidence on the effectiveness of water fluoridation and fluoride toothpaste, fluoride supplements (tablets or drops) are largely ineffective as a public health measure due to low levels of compliance. Fluoride supplement use in pre-school years also increases the risk of developing dental fluorosis. Because of this, fluoride supplements are not routinely recommended.
- 3.9 While breast milk is the best nutrition for infants, infant formula in Australia is used widely, especially between 3 and 12 months of age. As most formula products are sold as powder, their reconstitution with water can provide an additional source of fluoride for this group. Australian evidence does not support a link between the use of fluoridated water to reconstitute infant formula and the development of dental fluorosis. Therefore, infant formula can safely be reconstituted with optimally fluoridated water (around 1 part per million).
- 3.10 The addition of fluoride to bottled waters provides a potential opportunity for individuals to maintain fluoride access if they are regular bottled water consumers. This measure is, however, least likely to benefit those most in need, due to cost. Fluoridation of bottled water by manufacturers is not currently permitted in Australia (Food Standards Australia and New Zealand). This standard is listed to be reviewed
- 3.11 The use of fluorides is just one way to improve the oral health of Queenslanders. Queensland Health also encourages all Queenslanders to eat a healthy balanced diet, practice good oral hygiene, seek regular dental care and drink fluoridated water for good oral health.

4 Related Documents: Population Health Plan 2007-2012

Strategic Direction: Service development and enhancement 4

- Achieve a safe and fluoridated water supply

5 Principles for Fluoride Intake

5.1 Water fluoridation

- 5.1.1 Water fluoridation is an effective, efficient, socially equitable and safe population health measure for the prevention of tooth decay in Australia.ⁱⁱⁱ
- 5.1.2 The consumption of fluoridated water should be promoted to all Queenslanders and supported by all levels of government.
- 5.1.3 The level of fluoride in the water supply should be maintained within the ranges prescribed in the Regulation.ⁱⁱ
- 5.1.4 The fluoride content of bottled water should be clearly stated on the label.
- 5.1.5 Water filters that remove fluorides should not be recommended for persons at risk of tooth decay.

5.2 Fluoridated toothpaste

- 5.2.1 Fluoridated toothpaste is an effective measure for the prevention of tooth decay.
- 5.2.2 Ingestion of fluoride toothpaste should be discouraged.
- 5.2.3 Children under 6 years of age should use toothpaste under adult supervision. Toothpaste should be stored out of the reach of young children.
 - In non-fluoridated areas (less than 0.5 parts per million):**
 - For infants, from as soon as teeth appear up to 6 months of age, the teeth should be cleaned twice a day with a wet toothbrush or wet cloth by a parent or carer without toothpaste.
 - From six months of age up to six years of age, the teeth should be cleaned twice a day with low fluoride toothpaste (containing approximately 0.5 mg/g fluoride) under adult supervision. A small pea-sized amount of toothpaste should be used on a child-sized, soft toothbrush. Children should be encouraged to spit out after brushing. Excess toothpaste should not be swallowed. Children should not rinse after brushing as the very small amount of toothpaste left in the mouth, after spitting, continues to protect against tooth decay.

In fluoridated areas (0.5 – 1 parts per million):

- For infants, from as soon as teeth appear up to 18 months of age, teeth should be cleaned twice a day with a wet toothbrush or wet cloth for babies by a parent or carer without toothpaste.
- From 18 months up to six years of age, the teeth should be cleaned twice a day with low fluoride toothpaste (containing approximately 0.5 mg/g fluoride) under adult supervision. A small pea-sized amount of toothpaste should be used on a small soft toothbrush. Children should be encouraged to spit out after brushing. Excess toothpaste should not be swallowed. Children should not rinse after brushing as the very small amount of toothpaste left in the mouth, after spitting, continues to protect against tooth decay.

In all areas:

- 5.2.4 For all adults and children aged six years or over, the teeth should be cleaned twice a day with a pea-sized amount of standard fluoride toothpaste (containing around 1mg/g fluoride) on a small, soft toothbrush.
- 5.2.5 Rinsing after brushing is not required, as the very small amount of toothpaste left in the mouth, after spitting, continues to protect against tooth decay.

5.2.6 Teenagers and adults with elevated risk of tooth decay may use toothpaste with greater than 1mg/g fluoride only on the prescription and supervision of a dental professional.

5.3 Fluoride supplements

5.3.1 Where fluoridated water is not available, fluoride supplements may be prescribed by a dental professional for at risk individuals.

5.3.2 Fluoride supplements should not be taken (swallowed) directly by an adult or child in the form of drops or tablets.

5.3.3 Inappropriate use of fluoride supplements can significantly increase the risk of dental fluorosis, and lack of sustained daily compliance limits the benefits for oral health. These risks and benefits should be clearly explained to anyone considering fluoride supplements.

5.3.4 If supplements are recommended, the correct dosage of fluoride for each individual should be diluted in a single container of water for personal consumption throughout the day, to allow the maximum topical benefits to be gained.

5.3.5 Fluoride supplements should be kept in a child proof container and kept out of reach of children at all times.

5.4 Fluoride mouth rinses

5.4.1 Children below the age of six years should not use fluoride mouth rinses.

5.4.2 Fluoride mouth rinses may be used by people aged six years or over who have a higher risk of developing tooth decay. Fluoride mouth rinses should be used outside normal tooth brushing times, and should not be a substitute for brushing with fluoridated toothpaste. Mouth rinses should be spat out, not swallowed.

5.5 Professionally applied fluoride products

5.5.1 Fluoride varnish should be applied where appropriate by a dental professional, for children and adults who have a higher risk of developing tooth decay, for the prevention or the reversal of enamel demineralisation.

5.5.2 High concentration fluoride gels and foams (those containing more than 1.5 mg/g fluoride) may be prescribed by a dental professional for use by individuals aged 10 years or over who have a higher risk of developing tooth decay.

6 Associated Legislation and Policy

This Policy Directive should be read in association with the following documents:

- The use of fluorides in Australia: guidelines. Australian Research Centre for Population Oral Health, Dental School, The University of Adelaide, South Australia. Australian Dental Journal 2006; 51: (2): 195-199.
- Fluoridation of Public Water Supplies Act 1963
- Fluoridation of Public Water Supplies Regulation 1998
- Code of Practice for the Fluoridation of Public Water Supplies 2000
- Australian Dental Association Policy Statement 1.2.1 "Fluoride Use"
- *Water Fluoridation Act 2008* (see explanation 2.6-2.8).

7 Application

This policy provides updated information on the use of fluorides for appropriate application by all appropriate units and staff in Queensland Health. When providing oral health care and/or oral health advice, Queensland Health staff must ensure the provisions of this policy directive are implemented or passed on to those receiving care and/or advice.

Compliance with this policy directive is mandatory.

8 Review Date

November 2009

9 Approved by

Professor Andrew Wilson
Acting Director-General
Date: / /2008.

ⁱ Australian Research Centre for Population Oral Health. The Use of Fluorides in Australia: Guidelines. *Australian Dental Journal* 2006;51(2):195-199.

ⁱⁱ Queensland Government, Fluoridation Of Public Water Supplies Regulation 1964

ⁱⁱⁱ National Health and Medical Research Council. The Efficacy and Safety of Fluoridation 2007.