Northern Territory Government

DEPARTMENT OF HEALTH

POSITION STATEMENT

THE USE OF FLUORIDES IN THE NORTHERN TERRITORY

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General enquiries about this publication should be directed to:

Oral Health Service
Department of Health
PO Box 40596, Casuarina, NT 0811

1. Purpose

1.1. The purpose of this Position Statement is to inform the community and appropriate agencies in the Northern Territory of the Department of Health's advice regarding the recommended use of fluorides.

2. Objective

2.1. To improve the health and wellbeing of Territorians by reducing the burden of oral disease, and improving their oral health status.

3. Introduction

3.1. In June 2006, updated guidelines for the use of fluoride in Australia were published (Australian Research Centre for Population Oral Health). These guidelines have been informed by previous published Australian reports and reflect a consensus of expert opinion. The Department of Health has reviewed the guidelines and endorses their recommendations.

3.2. The National Health and Medical Research Council (NH&MRC) completed a review of the efficacy and safety of water fluoridation in June 2007. The review concluded that fluoridation of a water supply is the single most effective public health measure for reduction in caries across a population, with its most pronounced effects among those who are most disadvantaged.

3.3. The use of fluorides in oral health programs is one of the most important ways of preventing dental caries. A variety of reports and reviews into the efficacy of such programs have been carried out in Australia and internationally.

4. Background

4.1. In the NT, the public water supplies of Top End communities have low levels of naturally occurring fluoride, while those south of Elliott have higher levels. Darwin's water supply was fluoridated in 1972, and Katherine's supply is also fluoridated.

4.2. Approximately 46% of the population in the NT is deemed to live in a remote or very remote location, compared to 2.6% nationally. This impacts upon the government's ability to provide equitable access to infrastructure and services.

4.3. Despite significant improvements in the oral health of Australian children in the last 20 years, persistent high levels of oral disease are evident amongst Aboriginal and Torres Strait Islanders, people from low socio-economic backgrounds, refugees, and rural and remote populations.

4.4. Approximately 80% of Indigenous children in the NT live in remote areas. These children have average dental caries rates twice those of non-Indigenous children. In some communities these rates are up to five times higher. Regional differences are also apparent, with children living in the Top End recording higher dental caries rates than those in Central Australia.

4.5. Water fluoridation is recognised as one of the top ten public health interventions of the 20th century by the US based Centres for Disease Control and Prevention (CDC).

4.6. Fluoridating the water supplies of remote Indigenous communities is an effective public health intervention, which will contribute to closing the gap between Indigenous health outcomes and those of the non-Indigenous population.

4.7. The Department of Health encourages all Territorians to eat a healthy balanced diet, clean their teeth and gums at least twice a day, regularly use dental floss, seek regular dental care, and use appropriate discretionary fluorides.

5. Vehicles for Fluoride Delivery

5.1. Water Fluoridation

5.1.1. Water fluoridation remains an effective, efficient, socially equitable and safe population approach to the prevention of caries in the Northern Territory.

5.1.2. Water fluoridation should be extended to all people living in communities with a fixed population of 600 or more living in areas where naturally occurring fluoride is less than 0.5 mg/L (Gray et al).

5.1.3. Water fluoridation programs must be managed and monitored in accordance with best–practice standards. The responsibility for plant operation and water quality rests with the Department Housing, Local Government and Regional Services; Power Water Corporation; and relevant local government authorities.

5.1.4. The optimal fluoride concentration for water fluoridation is dependant on the average maximum air temperature.

Average Maximum Air temperature (^{o}C)	Fluoride (mg/L) Minimum	Maximum
32.6 and over	0.5	0.6
26.3 - 32.5	0.6	0.7
21.5 - 26.2	0.7	0.8
17.7 - 21.4	0.7	0.9

5.2. Fluoridated Toothpaste

5.2.1. Fluoridated toothpaste is effective in the prevention of dental caries.

5.2.2. Toothpaste is not recommended for infants less than 18 months old. However infants' teeth should still be brushed twice daily with a soft child's toothbrush.

5.2.3. The teeth of children between 18 months and five years of age (inclusive) should be cleaned twice daily with the assistance of an adult using low fluoride toothpaste (0.4 – 0.55 mg/g fluoride). A pea-sized amount of toothpaste should be applied to a child sized soft brush. Children should be encouraged to spit out after brushing, and not rinse. The small amount of fluoride left in the mouth continues to protect teeth against decay.

5.2.4. The teeth of children six years and over and adults should be brushed at least twice daily with standard fluoride toothpaste (1mg/g fluoride). It is best to spit out after brushing, and not rinse.

5.2.5. People who have an elevated risk of dental caries should consult their dental professional to ascertain whether an earlier use of standard fluoride toothpaste, more frequent brushing, or use of higher fluoride dose toothpaste is recommended.

5.2.6. The elderly and people with disabilities may require assistance with tooth brushing. The use of electric or battery-powered toothbrushes can be beneficial.

5.3. Fluoride Supplements

5.3.1. Fluoride supplements in the form of drops or tablets are not recommended because their inappropriate use can significantly increase the risk of dental fluorosis.

5.4. Fluoride Mouth Rinses

5.4.1. Children below the age of six years should not use fluoride mouth rinse, because of the elevated risk of fluorosis.

5.4.2. Fluoride mouth rinse may be appropriate for use by people aged over six years with an elevated risk of dental caries.

5.4.3. Fluoride mouth rinse should be used at different times in the day to when the teeth are brushed and should be spat out and not swallowed.

5.4.4. Fluoride mouth rinse is not a substitute for brushing with fluoridated toothpaste.

5.5. Fluoride Varnish, Gel and Foam

5.5.1. Professionally applied fluoride varnish is appropriate for people, including children, who have an elevated risk of dental caries.

5.5.2. The prescription of high concentration fluoride gels and foams (greater than 1.5mg/g fluoride) is appropriate for people aged over ten who have an elevated risk of dental carries.

6. References

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

6.2 Gray N, Beirne K, Zhao Y, Guthridge S. Water fluoridation in remote communities in the Northern Territory: A cost benefit analysis. 2008. Darwin: Department of Health and Families.

6.3 Hunter Water Australia. Fluoridation of Remote Communities Water Supply; Options Development and Assessment. 2008. Sydney.

6.4 National Health and Medical Research Council. A Systematic Review of the Efficacy and Safety of Fluoridation. 2007.