



Toi Te Ora – Public Health Service is committed to improving and protecting the health of the communities in the Bay of Plenty and Lakes districts.

Position Statement – Water Fluoridation

Water fluoridation is an effective and safe measure that reduces the occurrence of dental caries. Water fluoridation improves oral health for people of all ages and helps to reduce inequalities in oral health.

Toi Te Ora – Public Health Service recommends that all reticulated water supplies serving more than 1,000 people are fluoridated.

Naturally occurring fluoride levels in drinking water sources vary throughout the world depending on the type of soil and rock through which the water flows. Internationally, natural fluoride concentrations in water sources may range from an undetectable level to over 10 parts per million (ppm). Most water sources in New Zealand are deficient in fluoride with fluoride not naturally present at a level that helps prevent tooth decay.

Water fluoridation is the process of adjusting the fluoride concentration in fluoride deficient water supplies to the optimal level recommended for oral health. The optimal level is the range from 0.7 ppm to 1.0 ppm.

Fluoridation of water supplies serving more than 1,000 people is a cost effective population-based strategy to improve oral health. Fluoride works in three ways to help protect teeth from decay: it strengthens the tooth surface which makes teeth more resistant to decay; it interferes with the growth of the bacteria that cause cavities; and it helps to repair the early stages of tooth decay.

Dental decay is the most prevalent chronic disease in New Zealand. It represents a considerable health and economic burden and also contributes to health inequalities. The poorest oral health outcomes are found in Maori and Pacific children, and among those living in areas of socio-economic deprivation.

Water fluoridation has oral health benefits for both adults and children and assists in reducing inequalities in oral health outcomes. Adults and children living in fluoridated areas have significantly better oral health than those living in non-fluoridated areas with the reduction in caries averaging from fifteen to forty percent.

Water fluoridation at optimal levels is safe with no clear evidence linking water fluoridation with harmful health effects. Dental fluorosis can occur when young children are exposed to excessive amounts of fluoride when their teeth are developing. Mild forms of fluorosis, characterised by opaque white areas in the tooth enamel, may occur with optimally fluoridated water but this does not have a cosmetic or functional impact on the tooth.

Water fluoridation is an important component of an overall oral health strategy that also includes: twice daily tooth brushing with a fluoridated toothpaste; regular visits to a dental therapist or dentist; reduced consumption of sugars; well-balanced nutrition; fruit and vegetable consumption; breastfeeding of infants; a smokefree environment; and reduced alcohol consumption.

Toi Te Ora – Public Health Service advocates and supports:

- Fluoridation of all reticulated water supplies serving more than 1,000 people.

References and further information

Centers for Disease Control and Prevention website: www.cdc.gov/fluoridation.

Fawell, J., Bailey, K., Chilton, J. *et al* (2006). *Fluoride in Drinking Water*. Geneva: World Health Organisation.

Ministry of Health (2010). *Our Oral Health: Key Findings of the 2009 New Zealand Oral Health Survey*. Wellington: Ministry of Health.

Ministry of Health website: <http://www.health.govt.nz/our-work/preventative-health-wellness/fluoridation>.

National Fluoridation Information Service:
www.huttvalleydhb.org.nz/RPH/Article.aspx?ID=2974.

National Health and Medical Research Council of Australia (2007). *A Systematic Review of the Efficacy and Safety of Fluoridation*, available at <http://www.nhmrc.gov.au>.

Petersen, P. (2003). *The World Oral Health Report 2003: Continuous improvement of oral health in the 21st century – the approach of the WHO Global Health Programme*. Geneva: World Health Organisation.

World Health Organisation website: http://www.who.int/oral_health;
http://www.who.int/water_sanitation_health/oralhealth.

Wright, J., Bates, M., Cutress, T. and Lee, M. (1999). *The Cost-Effectiveness of Fluoridating Water Supplies in New Zealand*. Porirua: Institute of Environmental Science and Research Limited (ESR).

*This statement aligns with the Bay of Plenty District Health Board's statement and provides the public health perspective on this issue.

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