

Auckland Regional Public Health Service

Rātonga Hauora ā Iwi o Tamaki Makaurau



Working with the people of Auckland, Counties Manukau and Waitemata

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Food Standards Australia New Zealand
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NEW ZEALAND

Submission from the Auckland Regional Public Health Service on the Voluntary Addition of Fluoride to Packaged Water

1. Thank you for the opportunity for the Auckland Regional Public Health Service to provide a submission to the Food Standards Australia New Zealand.
2. This submission represents the views of the Auckland Regional Public Health Service (ARPHS). ARPHS provides public health services for the three district health boards in the Auckland region (Auckland, Counties Manukau and Waitemata District Health Boards), with the primary governance mechanism for the Service resting with Auckland District Health Board. This submission represents the views of the ARPHS and does not necessarily represent the views of the three District Health Boards.
3. ARPHS understands that all submissions will be available under the Official Information Act 1982, except if grounds set out under the Act apply.
4. The primary contact point for this submission is:

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Introduction

5. ARPHS, as a public health agency, seeks to influence proposals that may affect population health in the Auckland region to maximise their positive impact and minimise possible negative effects.
6. Access to fluoridated water is one of the key determinants of oral health. This is one of the most important preventive measures available against tooth decay at both individual and population level¹.
7. ARPHS supports the New Zealand Ministry of Health's recommendation that fluoridated water is considered a cost-effective strategy for dental caries prevention.
8. The Auckland region faces a large burden of oral health problems. Children from low socioeconomic positions, particularly those of Māori and Pacific ethnicity, are disproportionately suffering from poorer oral health status².
9. ARPHS has elected to comment on only some of the questions posed in the consultation document.

Proposed Regulatory Options

Option 2: Amend Standard 1.3.2 to permit the voluntary addition of fluoride to packaged water up to a maximum claimable amount of 1.5 mg/L

10. ARPHS supports allowing the voluntary addition of fluoride as a claimable nutrient to packaged water. There is vast evidence demonstrating the effectiveness and safety of fluoridated water in preventing tooth decay³. For instance, the lifetime benefit from drinking fluoridated water is estimated to be the prevention of 2.4-12.0 decayed, missing or filled teeth per person⁴.

Do you consider 1.5 mg/L to be an appropriate maximum claimable amount for the voluntary addition of fluoride to packaged water?

11. The Drinking-water Standards for New Zealand specifies that the maximum acceptable value (MAV) of fluoride concentration in drinking-water is 1.5 mg/L⁵. This value represents the concentration that, on the basis of present knowledge, is not considered to cause any significant risk to the health of the individual over their lifetime⁶ of consumption of that water⁷.
12. ARPHS notes, however, that the New Zealand Ministry of Health has recommended that the optimal content of fluoride in drinking water is between

1 Thomson W (1997) Preventive Dental Strategies for Older populations: a report to the National Health Committee. Wellington: National Health Committee.

2 Auckland Regional Public Health Service (2006) Improving Health and Wellbeing: A Public Health Perspective for Local Authorities in the Auckland Region. Auckland: Author.

3 National Advisory committee on Health and Disability (2003) Improving Child Oral Health and Reducing Child Oral Health Inequalities. Wellington: Author

4 Public Health Commission. (1994) Water Fluoridation in New Zealand. Wellington: Author.

5 Ministry of Health (2005) Drinking-water Standards for New Zealand. Wellington: Author.

6 For a person who consumes 2 L of that water a day over their lifetime (usually taken as 70 years). The calculation is based on a national average body weight of 70 kg.

7 However, it is usually not possible to define a concentration of contaminant at which zero risk exists because a degree of uncertainty over the magnitude of the risk always exists.

0.7 and 1.0 mg/L⁸. Also, there is evidence of a dose dependent increase in dental fluorosis⁹ (mottling teeth) which may occur at a prevalence of 12-33% at drinking-water concentrations between 0.9 and 1.2 mg/L¹⁰

13. ARPHS supports the New Zealand Ministry of Health's recommendation and believes that 1mg/L is a more appropriate maximum claimable amount if the intention is to promote oral health.

Are there any potential impacts of allowing the voluntary addition of fluoride to packaged water on any vulnerable sub-populations in the community e.g. infants or young children?

14. **Consumption** Some opponents of water fluoridation have argued that fluoride consumption can result in a number of adverse health effects such as cancer, damage bones, and thyroid and brain disease. Recent reports by the Public Health Commission¹¹, National Health Medical Research Council of Australia¹² and the World Health Organisation¹³ have addressed these concerns and found that many of the articles that raise fears about water fluoridation lack substance or repeat previous statements already shown to be without scientific validity.
15. **Children** Tooth enamel fluorosis is one of a range of changes to tooth enamel attributed to fluoride and has been shown to have a dose-response effect. Mild dental fluorosis may occur at concentrations between 1.5 and 2 mg/L¹⁴.
16. **Inequalities** Access to fluoridated water is regarded as a major determinant of oral health. Addressing this issue would have a positive impact on the oral health outcomes of specific groups. For instance, adding fluoride to packed water represents, as a voluntary option, an alternative for those who do not have access to tap fluoridated water. Thus, people living in the Onehunga Supply Zone in the Auckland city region – which is currently not fluoridated – could get the benefits from fluoridated water.
17. However, it is unlikely that those from low socio-economic position will benefit from this due to cost. The applicant assumes that consumers will pay a premium price for this product. According to AC Nielsen's Panorama team¹⁵ "Bottled water drinkers tend to be under 40. They are more likely to be female, (...) Their attitudes reflect a youthful, social group - they like to dine out, they like music, and shopping. They are more likely to play sport and exercise than the total population, with fitness activities such as walking, cycling, going to the gym and swimming popular. They visit the cinema and use the Internet more than the average kiwi and read a lot of magazines."

8 Ministry of Health (2005) Drinking-water Standards for New Zealand. Wellington: Author.

⁹ McDonagh M, Whiting P, Bradley M, Cooper J, Sutton A, Chestnutt I, Misso K, Wilson P, Treasure E, Kleijnen J (2000) A systematic review of public water fluoridation. University of York, 243 pg

¹⁰ Ministry of Health (2005) The Guidelines for Drinking-water Quality Management for New Zealand. Wellington: Author.

¹¹ Public Health Commission. (1994). Water Fluoridation in New Zealand. Wellington: Author.

¹² National Health and Medical Research Council of Australia. (2007). A Systematic Review of the Efficacy and Safety of Fluoridation. Canberra: Author.

¹³ World Health Organisation. (2006). Fluoride in drinking water. Geneva: Author.

¹⁴ Ministry of Health (2005) The Guidelines for Drinking-water Quality Management for New Zealand. Wellington: Author.

¹⁵ Cited at: <http://www.themarketingguy.co.nz/Latest/THE-WATER-STORY.html>. On 21/04/08

18. It is well known that those in low socioeconomic-disadvantaged populations, mainly Māori and Pacific communities, have poorer oral health. As the target population for bottled water is different to those in the greatest oral health need, inequalities for these populations would not be addressed. It is very likely that the disadvantaged population within the Auckland Region could not afford to purchase this product.

Would consumers perceive packaged water with added fluoride to be nutritionally equivalent to fluoridated tap water? Is there potential for consumers to be misled about the nutritional equivalence of fluoridated packaged water versus other fluoridated water sources? In addition to current mandatory labelling requirements, should FSANZ consider any specific labelling requirements for fluoridated packaged water?

19. ARPHS supports the consumer to be able to make well-informed decisions, which requires clear labelling. The consumer should be informed that fluoridated packed water is regarded as equivalent to tap water and both offer similar oral health benefits.
20. If the label does not have this information, the consumer could be misled into thinking that fluoridated packed water has more benefit than tap water. To illustrate the point, in a marketing survey¹⁶ more than twice as many consumers valued bottled water over milk as the beverage most associated with a healthy lifestyle.

Conclusion

21. ARPHS believes that permitting voluntary addition of fluoride up to 1.0 mg/L to packed water would have a positive effect on oral health in specific groups within the Auckland region.

Thank you for the opportunity to submit on this issue.

Yours faithfully,



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¹⁶ Cited at: <http://www.themarketingguy.co.nz/Latest/THE-WATER-STORY.html>. On 21/04/08