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## **Board of Health**

## Resolution on Community Water Fluoridation (CWF)

WHEREAS, Dental caries – the destruction of dental hard tissues – can result in pain, infection and tooth loss<sup>1</sup>,

WHEREAS, Dental caries, or tooth decay, is a common chronic disease that can cause pain, suffering, and diminished quality of life throughout one's lifespan<sup>2</sup>,

**FURTHERMORE,** Left untreated, tooth decay can progress and lead to infection, tooth loss, and more complex and expensive treatments. Untreated tooth decay can affect essential aspects of daily living, including eating, speaking, and performing at home, school, or work<sup>2</sup>,

**WHEREAS,** Dental caries is one of the most common non-communicable diseases that affects both adults and children globally <sup>3</sup>,

**WHEREAS,** Community water fluoridation is hailed as one of ten great public health achievements of the 20th century <sup>4</sup>,

**WHEREAS,** The health and social impact of dental caries have been reported among people of all ages, from very young children to the elderly <sup>5,6,7</sup>,

WHEREAS, The economic impact of dental caries on the affected individuals and society has also been documented 8,

**WHEREAS,** An adequate continuous exposure to fluoride provides significant protection from dental caries <sup>13, 14</sup>.

**WHEREAS,** Children with poor oral health are more likely to miss school and suffer academically 10.11.12,

**WHEREAS,** Numerous recent systematic reviews have found that water fluoridation is associated with a significant decrease in dental caries, mostly in children<sup>15, 16, 17, 18, 19</sup>,

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**WHEAREAS,** A review by the US Community Preventive Services Task Force (CPSTF), found that starting water fluoridation decreased caries in children aged 4-17 by 30-50% and that stopping water fluoridation increased caries by 18% <sup>20</sup>,

WHEREAS, Community water fluoridation is a safe method of delivering fluoride at a population level with numerous systematic reviews of the potential adverse health effects of water fluoridation not finding evidence that there is a significant or consistent association between water fluoridation and the adverse outcomes investigated including neurologic conditions, cancer or osteoporosis <sup>21,22,23,24,25</sup>,

**WHEREAS,** Community water fluoridation is a highly cost-effective means of preventing tooth decay <sup>26</sup>,

WHEREAS, numerous respected subject matter experts on dental health endorse community water fluoridation as a safe and effective means to reduce dental cares including the American Dental Association, American Academy of Pediatrics, American Association of Public Health Dentistry, American Medical Association, American Public Health Association, Centers for Disease Control and Prevention, National Dental Association, National Institute of Dental & Craniofacial Research, Parent Teachers Association, U. S. Surgeon General, and the World Health Organization,

**WHEREAS,** Community water fluoridation benefits all members of a community regardless of socioeconomic status,

## THEREFORE IT BE RESOLVED THAT:

The Western Plains Public Health Board of Health supports the use of community water fluoridation as a safe and effective public health strategy to reduce dental caries and improve community oral health.

ADOPTED: February 21, 2025

WPPH Board of Health President

## **REFERENCES:**

- 1. Pitts NB, Zaro DT, Marsh PH, Ekstrand K, Weintraub JA, Ramos-Gomez F, Tagami J, Twetman S, Tsakos G, Ismail A. 2017. Dental Caries. Nat Rev Dis Primers. 3: p. 17030.
- 2. Title: Oral health surveillance report: trends in dental caries and sealants, tooth retention, and edentulism, Unit- ed States: 1999–2004 to 2011–2016.
- 3. Kassebaum NJ, Smith AGC, Bernabe E, Fleming TD, Reynolds AE, Vos T, Murray CJL, Marcenes W, GBD 2015 Oral Health Collaborators. 2017. Global, Regional, and National Prevalence, Incidence, and DisabilityAd- justed Life Years for Oral Conditions for 195 Countries, 1990-2015: A Systematic Analysis for the Global Burden of Diseases, Injuries, and Risk Factors. J Dent Res. 96(4): p. 380-387.
- 4. Centers for Disease Control and Prevention (CDC). Ten great public healthachievements--United States, 1900
  - a. 1999. MMWR Morb Mortal Wkly Rep. 1999 Apr 2;48(12):241-3.
- 5. Heilmann AG. Tsakos, Watt RG. 2015. Oral Health Over the Life Course, in a Life Course Perspective on Health Trajectories and Transitions. Springer: Cham (CH). p. 39-59.
- Tinanoff N, Baez RJ, Diaz Guillory C, Donly KJ, Feldens CA, McGrath C, Phantumvanit P, Pitts NB, Seoq WK, Sharkov N, Songpaisan Y, Twetman S. 2019. Early Childhood Caries Epidemiology, Aetiology, Risk Assess- ment, Societal Burden, Management, Education, and Policy: Global perspective. Int J Paediatr Dent. 29(3): p. 238-248.
- 7. Tonetti MS, Bottenberg P, Conrads G, Eickholz P, Heasman P, Huysmans MC, Lopez R, Madianos, Muller F, Needleman I, Nyvad B, Preshaw PM, Pretty I, Renvert S, Schwendicke F, Trombelli L, van der Putten GJ, Vanobbergen J, West N, Young A, Paris S. 2017. Dental Caries and Periodontal Diseases in the Ageing Popula- tion: Call to Action to Protect and Enhance Oral Health and WellBeing as an Essential Component of Healthy Ageing Consensus Report of Group 4 of the Joint EFP/ORCA Workshop on the Boundaries Between Caries and Periodontal Diseases. J Clin Periodontol. 44 Suppl 18: p. S135-s144
- 8. Ran T, Chattopadhyay SK. 2016. Economic Evaluation of Community Water Fluoridation: A Community Guide Systematic Review. Am J Prev Med. **50**(6): p. 790-6.
- 9. Casamassimo PS, Thikkurissy S, Edelstein BL, Maiorini E. 2019. Beyond The Dmft: The Human and Economic Cost of Early Childhood Caries. J Am Dent Assoc. 140(6): p. 650-657.
- 10. Jackson SL, Vann Jr WF, Kotch JB, Pahel BT, Lee JY. 2011. Impact of Poor Oral Health on Children's School Attendance and Performance. Am J Public Health. 101(10): p. 1900-6.
- 11. Guarnizo-Herreño CC, Lyu W, Wehby GL. 2019. Children's Oral Health and Academic Performance: Evi-
  - a. dence of a Persisting Relationship Over the Last Decade in the United States. J Pediatr. 209: p. 183-189.e2.
- 12. Fejerskov O, Larsen MJ, Richards A, Baelum V. 1994. Dental Tissue Effects of Fluoride. Adv Dent Res. 8(1): p. 15-31.
- 13. Zohoori FV, Duckworth RM. 2020. Chapter 5: Microelements: Part II: F, Al, Mo and Co. Monogr Oral Sci.
  - a. **28**: p. 48-58.

- 14. U.S. Department f Health and Human Services. 2015. U.S. Public Health Service Recommendation for Fluo- ride Concentration in Drinking Water for the Prevention of Dental Caries. Public Health Reports. 130(4): p. 318-331.
- **15.** Iheozor-Ejiofor Z, Worthington HV, Walsh T, O'Malley L, Clarkson JE, Macey R, Alam R, Tugwell P, Welch V, Glenny AM. 2015. Water Fluoridation for the Prevention of Dental Caries. Cochrane Database Syst Rev. (6): p. Cd010856.
- **16.** McDonagh MS, Whiting PF, Sutton AJ, Chestnutt I, Cooper J, Misso K, Bradley M, Treasure E, Kleijnen J. 2000. Systematic Review of Water Fluoridation. BMJ. **321**(7265): p. 855-9.
- 17. National Health and Medical Research Council. 2017. Information Paper Water Fluoridation: Dental and Other Human Health Outcomes. [accessed 19 February 2021]; www.nhmrc.gov.au/guidelines/publications/EH43
- 18. Truman BI, Gooch BF, Sulemana I, Gift HC, Horowitz AM, Evans CA, Griffin SO, Carande-Kulis VG, Task Force on Community Preventive Services. 2002. Reviews of Evidence on Interventions to Prevent Dental Caries, Oral and Pharyngeal Cancers, and Sports-Related Craniofacial Injuries. Am J Prev Med. 23(1 Suppl): p.21-54.
- 19. Truman BI, Gooch BF, Sulemana I, Gift HC, Horowitz AM, Evans CA, Griffin SO, Carande-Kulis VG, Task Force on Community Preventive Services. 2002. Reviews of Evidence on Interventions to Prevent Dental Caries, Oral and Pharyngeal Cancers, and Sports-Related Craniofacial Injuries. Am J Prev Med. 23(1 Suppl): p.21-54.
- **20.** McDonagh MS, Whiting PF, Sutton AJ, Chestnutt I, Cooper J, Misso K, Bradley M, Treasure E, Kleijnen J. 2000. Systematic Review of Water Fluoridation. BMJ. **321**(7265): p. 855-9.
- 21. National Health and Medical Research Council. 2017. Information Paper Water Fluoridation: Dental and Other Human Health Outcomes. [accessed 19 February 2021]; www.nhmrc.gov.au/guidelines/publications/EH43
- 22. Guth S, Huser S, Roth A, Degen D, Diel P, Edlund K, Eisenbrand G, Engel KH, Epe B, Grune T, Heinz V, Henle T, Humpf HU, Jager H, Joost HG, Kulling SE, Lampen A, Mally A, Marchan R, Marko D, Muhle E, Niitsche MA, Rohrdanz E, Stadler R, van Thriel C, Vieths S, Vogel RF, Wascher E, Watzl C, Nothlings U, Hengstler JG. 2020. Toxicity of Fluoride: Critical Evaluation of Evidence for Human Developmental Neurotoxici- ty in Epidemiological Studies, Animal Experiments and In Vitro Analyses. Arch Toxicol. 94(5): p. 1375-1415.
- 23. Scientific Committee on Health and Environmental Risks. 2011. Opinion on Critical Review of any New Evi- dence on the Hazard Profile, Health Effects, and Human Exposure to Fluoride and the Fluoridating Agents of
  - a. Drinking Water. [accessed 19 February 2021];
    https://ec.europa.eu/health/scientific\_committees/
  - b. environmental risks/docs/scher\_o\_122.pdf.
- **24.** Aggeborn L, Öhman M. 2020. The Effects of Fluoride in Drinking Water. Journal of Political Economy. **129** (2): p. 465-491.
- **25.** Ran T, Chattopadhyay SK. 2016. Economic Evaluation of Community Water Fluoridation: A Community Guide Systematic Review. Am J Prev Med. **50**(6): p. 790-6.