

## **Community Water Fluoridation**

### **I. The Effect of Fluoridation on Public Health**

Water fluoridation is the precise control of fluoride in drinking water to optimal levels known to be safe and effective in preventing dental caries. Fluoridation yields a return on investment in that every dollar spent on fluoridation saves \$38 in dental treatment.<sup>1</sup> The U.S. Task Force on Community Preventive Services strongly recommends that community water fluoridation be included as part of a comprehensive population-based strategy to prevent or control dental caries in populations.<sup>2</sup> Water fluoridation benefits all persons in a community, without regard to age, race, ethnicity or socio-economic status. Unfortunately, over one third of the U.S. population (100 million people) does not benefit from this critical public health intervention.

According to the U.S. Surgeon General's Report, *Oral Health in America*, oral health is essential to the general health and well-being of all Americans. The report further states that dental caries (commonly called tooth decay) is the most common chronic childhood disease, five times more common than asthma and seven times more common than hay fever.<sup>3</sup>

An estimated fifty-one million school hours are lost each year in this country due to dental disease.<sup>4</sup> Students with preventable or untreated health and developmental problems may have trouble concentrating and learning, have frequent absences from school, or develop permanent disabilities that affect their ability to learn and grow.<sup>5</sup> Poor oral health has been related to decreased school performance, poor social relationships, and less success later in life. Children experiencing pain are distracted and unable to concentrate on schoolwork.<sup>6</sup>

Dental disease in adults contributes to a burden of treatment costs for individuals and businesses and results in lost productivity and reduced quality of life. Employed adults lose more than 164 million hours of work each year due to dental disease or dental visits.<sup>1</sup> Dental care costs the U.S. \$91.5 billion in expenditures in 2007.<sup>7</sup>

Dental disease is costly and burdensome, even though it is almost 100 percent preventable. Safe and effective disease prevention measures exist to improve oral health and prevent disease. For example, community water fluoridation is the single most effective public health measure to prevent dental caries and, according to the Centers for Disease Control and Prevention, one of the ten great public health achievements of the 20<sup>th</sup> century.<sup>8</sup> For more than 60 years, community water fluoridation has been at the forefront of preventing dental caries.

### **II. ASTHO Position on Fluoridation**

To promote dental health, ASTHO supports the Healthy People (HP) goal to increase the percentage of persons on public water supplies receiving optimally fluoridated water to a minimum of 75 percent through:

- Fluoridation of community water systems as a safe and effective way to assure the dental health of our citizens at levels recommended by the CDC- 0.7 - 1.2 ppm (mg/L)<sup>9</sup>.
- Proposing and supporting public policies and programs that advance community water fluoridation.
- Partnering with the dental care providers, medical providers, water works associations, and State Drinking Water Administrators to increase the awareness of the benefits of fluoride.
- Providing science and research, and proven public health practice, to assure that efforts to prevent dental caries through water fluoridation remain based on accurate data and up-to-date scientific information.

ASTHO acknowledges the review of the U.S. Environmental Protection Agency's drinking water standard for naturally occurring levels of fluoride in drinking water conducted by the National Academy of Sciences. The review was conducted in order to assess the level of protection from adverse toxic health effects that can result from over-exposure to naturally occurring fluoride. The EPA prescribes the maximum contaminant level (MCL) of 4 mg/L for naturally occurring levels of fluoride in drinking water.<sup>10</sup> ASTHO encourages the EPA to undertake additional research, as recommended by the National Academy of Sciences, to further assess the adequacy of protection afforded by the current MCL for naturally occurring fluoride in drinking water. ASTHO also encourages the EPA to perform these assessments in consideration of the possible health effects on a small child, rather than an average adult.

### **Approval History:**

*Environmental Health Policy Committee Review on February 17, 2009*  
*Prevention Policy Committee Review on February 19, 2009*  
*Executive Committee Review and Approval on March 13, 2009*  
*Position Expires on March 13, 2012.*

*ASTHO policies are broad statements of enduring principles related to particular policy areas that are used to guide ASTHO's actions and external communications.*

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### **REFERENCE**

- <sup>1</sup> Griffin SO, Jones K, Tomar SL. An economic evaluation of community water fluoridation. *Journal of Public Health Dentistry* 2001; 61(2): 78-86.
- <sup>2</sup> Task Force on Community Preventive Services. Recommendation on selected interventions to prevent dental caries, oral and pharyngeal cancers and sports-related craniofacial injuries. *American Journal of Preventive Medicine* 2002; 23(1S)16-20.
- <sup>3</sup> US Department of Health and Human Services. *Oral Health in America: A Report of the Surgeon General - Executive Summary*. Rockville, MD: US Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.
- <sup>4</sup> Gift HC. 1997. Oral health outcomes research: Challenges and opportunities. In Slade GD, ed., *Measuring Oral Health and Quality of Life* (pp. 25–46). Chapel Hill, NC: Department of Dental Ecology, University of North Carolina.
- <sup>5</sup> McCart L, Stief E. 1996. *Creating Collaborative Frameworks for School Readiness*. Washington, DC: National Governors Association.
- <sup>6</sup> U.S. General Accounting Office. 2000. *Oral Health: Dental Disease is a Chronic Problem Among Low-Income and Vulnerable Populations*. Washington, DC: U.S. General Accounting Office.
- <sup>7</sup> American Dental Association. 2008. Key Dental Facts.
- <sup>8</sup> Centers for Disease Control and Prevention. "Ten great public health achievements" – United States, 1990-1999. *MMWR* 1999;48(12):241-3
- <sup>9</sup> Public Health Service. "Public Health Service drinking water standards--revised 1962." Washington, DC: US Department of Health, Education, and Welfare, 1962. *PHS publication no. 956*.
- <sup>10</sup> The National Academies, Committee on Fluoride in Drinking Water. 2006. *Fluoride in Drinking Water: A Scientific Review of EPA's Standards*. Washington, DC: National Academies Press.