

COMMUNITY WATER FLUORIDATION IN IOWA

The Centers for Disease Control & Prevention, the U.S. Surgeon General, and the Iowa Department of Public Health support fluoridation of public water supplies because of its health benefits to the public.

TOOTH DECAY

Tooth decay affects all age groups. And although it is preventable, it is the most common chronic disease of childhood. Untreated decay can lead to pain, tooth loss, poor nutrition, and difficulty eating, sleeping, and learning. Nearly one-fifth of all health care spending for children is related to dental care.ⁱ

BENEFITS OF FLUORIDATION

Fluoride strengthens tooth enamel, making teeth more resistant to decay. When fluoride is found naturally or added to community drinking water at proper concentrations, tooth decay can be prevented. The entire community benefits – all ages and income levels.

Community water fluoridation is one of the top ten public health achievements of the twentieth century due to its impact in reducing the amount of tooth decay experienced by Americans, particularly children. Fluoridation safely and inexpensively has reduced tooth decay up to 40 percent.ⁱⁱ

The Task Force on Community Preventive Services – an independent, nonfederal, volunteer group of public health and prevention experts – strongly recommends community water fluoridation. Their systematic review found that stopping fluoridation was associated with an increase in tooth decay.ⁱⁱⁱ

COST AND SAVINGS

By preventing tooth decay, water fluoridation saves money, both for families and for the health care system. Depending on the number of residents in a community, every dollar spent on fluoridation can save up to \$38 in avoided dental bills. Over a lifetime, the cost of fluoridation can be less than the cost of one dental filling.^{iv} Although helpful, fluoride tablets, rinses, and toothpaste are more expensive and less effective than the fluoridation of drinking water.^v

ADDRESSING SAFETY CONCERNS

Fluoride is a naturally occurring element, present in water and food. In fact, in Iowa it is not uncommon to have naturally-occurring fluoride in water from 0.1 to greater than 1.0 milligrams per liter. Fluoridation of community drinking water involves adjusting the naturally-occurring concentration of fluoride to a level that is recommended for preventing tooth decay.

The current recommendation for preventing tooth decay is 0.7 milligrams per liter. The recommended level has recently been reduced because Americans have access to more topical fluoride than previously – a “halo” effect. For example, more people use fluoridated toothpaste, over-the-counter rinses, and consume food and drink that has been processed in fluoridated areas. The Iowa Department of Public Health monitors all water systems that add fluoride to assure the concentration is appropriate.

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ⁱ US Dept. of Health & Human Services, NIDCR, Oral Health in America: A Report of the Surgeon General. Rockville, MD, 2000.

ⁱⁱ Burt BA, Eklund SA. Dentistry, dental practice, and the community. Philadelphia, PA: WB Saunders Company, 1999:204-20.

ⁱⁱⁱ Truman BI, Gooch BF, Sulemana I, et al. Task Force on Community Preventive Services. Review of evidence on interventions to reduce dental caries, oral and pharyngeal cancers, and sports-related craniofacial injury. American Journal of Preventive Medicine. 2002. 23(1S) 1-84.

^{iv} Griffin SO, Jones K, Tomar SL. An Economic Evaluation of Community Water Fluoridation. Journal of Dental Public Health. 2001;61(2):78-86.

^v Kumar JV, Moss ME. Fluorides in Dental Public Health Programs. Dent Clin N Am. 2008;52:387-401.