The Clear Weight of the Evidence:
A Summary of Research Supporting Water Fluoridation

Decades of research confirm the benefits of water fluoridation. Some people may question the value of fluoridating water at a time when fluoride toothpaste is widely used and children can get fluoride treatments from dentists. The following peer-reviewed studies and reports answer this question because many of them were conducted within the past 20 years—when both fluoride toothpaste and fluoride treatments were widely available. This research demonstrates the crucial, added protection against tooth decay that fluoridated water provides:

It reduces the rate of tooth decay among children

- The U.S. Task Force on Community Preventive Services—a blue-ribbon panel of experts—examined 21 studies and concluded in its 2000 report that fluoridated water reduces tooth decay by a median rate of 29% among children of ages 4 to 17.¹

- A study of Alaska children (2011), conducted by the Centers for Disease Control and Prevention, showed that children living in non-fluoridated areas had a 32% higher rate of decayed, missing or filled teeth than kids in fluoridated communities.²

- A study of Illinois and Nebraska children (1998) found that the tooth decay rate among children in the fluoridated town was 45% lower than the rate among kids in the two non-fluoridated towns. This benefit occurred even though the vast majority of children in each of these communities were using fluoridated toothpaste.³

- A Nevada study (2010) examined teenagers’ oral health and found that living in a community without fluoridated water was one of the top three risk factors associated with high rates of decay and other dental problems.⁴

- A study of more than 17,000 Australian children (2003) found that fluoridated water’s “preventive effect was maximized by continuous exposure both before and after eruption (i.e., when teeth first appear in the mouth).” This finding refutes the claim made by fluoridation opponents that topical application of fluoride is the only effective way to use fluoride.⁵

It protects adults’ dental health

- Nine studies were analyzed (2007) in the Journal of Dental Research to estimate water fluoridation’s impact on adult teeth, and this report concluded that fluoridation reduced decay by 27%. The co-authors noted the study’s significance for seniors because Medicare does not cover routine dental services and this lack of coverage “increases the need for effective prevention” of decay among older adults.⁶
It reduces disparities in dental health

- A 2002 study concluded that water fluoridation is "the most effective and practical method" for reducing the gap in decay rates between low-income and upper-income Americans. The study concluded, "There is no practical alternative to water fluoridation for reducing these disparities in the United States."

- A study in the American Journal of Public Health (2010) determined that the fluoridated water consumed as a young child makes the loss of teeth (due to decay) less likely 40 or 50 years later when that child is a middle-aged adult. The co-authors wrote that this study suggests that the benefits of fluoridation "may be larger than previously believed and that [fluoridation] has a lasting improvement in racial/ethnic and economic disparities in oral health."

- Australia's National Health and Medical Research Council (2007) reviewed 77 studies and concluded that fluoridation "remains the most effective and socially equitable means of achieving community-wide exposure" to the decay-prevention effects of fluoride.

It saves communities money

- A New York study (2010) revealed that low-income children in less fluoridated counties needed more dental treatments than those living in counties where fluoridated water was common. The annual treatment costs per Medicaid recipient were $23.65 higher for those living in less fluoridated counties. A Texas study (2000) found that fluoridation saved the state Medicaid program an average of $24 per child, per year. Fluoridated water saved Colorado nearly $149 million in 2003 by avoiding unnecessary treatment costs.

Sources: