

# Water fluoridation confirmed to prevent dental decay in US children and adolescents

The fluoridation of America's drinking water was among the great public health achievements of the twentieth century but there is a scarcity of studies from the last three decades investigating the impact of water fluoridation on dental health in the U.S. population. A recent study "Water fluoridation and dental caries in U.S. children and adolescents," published in the *Journal of Dental Research*, evaluated associations between the availability of community water fluoridation and dental caries (decay) experience in U.S. child and adolescent populations.

In this large study, county-level estimates of the percentage of population with community water fluoridation from the Centers for Disease Control and Prevention's Water Fluoridation Reporting System were merged with dental examination data from 10 years of National Health and Nutrition Examination Surveys (1999-2004 and 2011-2014).

The analysis showed that U.S. children and adolescents with greater access to fluoridated drinking water were less likely to experience dental caries. Counties in which over 75% of the population had access to community water fluoridation saw a 30% reduction in dental caries experience in the primary dentition, and a 12% reduction in dental caries experience in the permanent dentition, compared to counties in which less than 75% had access to community water fluoridation.

The findings are consistent with evidence from the last half-century showing that community water fluoridation continues to provide a substantial dental health benefit for U.S. children and adolescents. The current study boosts the evidence by showing that the benefit is most pronounced early in life, in the primary teeth of 2-8 year olds.

"This study confirms previously reported findings and provides additional evidence in support of water fluoridation as a core public health intervention promoting oral health," said Maria Ryan, President of the American Association for Dental Research. "AADR supports community water fluoridation as a safe and effective, evidence-based intervention for the prevention of dental caries and this report further adds to that evidence base."

## **Explore further:**

Water fluoridation: Safety efficacy and value in oral health care

## **More information:**

G.D. Slade et al, Water Fluoridation and Dental Caries in U.S. Children and

Adolescents, *Journal of Dental Research* (2018). DOI: 10.1177/0022034518774331

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