

Fluoride in Water Prevents Adult Tooth Loss, Study Suggests

Children drinking water with added fluoride helps dental health in adulthood decades later, a new study finds.

In an article appearing in the October issue of the American Journal of Public Health, Matthew Neidell reports a strong relationship between fluoride levels in a resident's county at the time of their birth with tooth loss as an adult. "Your fluoridation exposure at birth is affecting your tooth loss in your 40s and 50s, regardless of what your fluoridation exposure was like when you were 20 and 30 years old," said Neidell, a health policy professor at the Mailman School of Public Health at Columbia University.

He combined data from a recent Centers for Disease Control and Prevention community health study and a water census to see the impact of drinking fluoridated water in the 1950s and 1960s on tooth loss in the 1990s. "We know that the benefits of fluoridation are greatest from birth," said Howard Pollick, a professor of clinical dentistry at the University of California, San Francisco. "This recent study adds credence to that."

For children whose adult teeth haven't shown yet, fluoride still improves tooth enamel, the highly mineralized tissue on teeth's surface. Fluoride also helps teeth damaged from the decay process and breaks down bacteria on teeth.

The researchers write that respondents who did not live in the same county their entire lives received differing amounts of fluoride in their water, which complicated study findings. The study, which focused on tooth loss as an indication of overall oral health, could not adjust for factors such as use of toothpaste, which also provides a dose of fluoride.

Pollick said that roughly 75 percent of people served by public water systems have fluoride added. The process uses small amounts of the naturally occurring mineral to increase concentrations to no more than one part per million typically.

The American Dental Association, which has supported fluoridation of community water since 1950, says scientists continue to show adding the mineral to water is safe and aids tooth health. One 2007 study of Kaiser Permanente HMO members found that adults benefitted from community fluoridation more than children.

Pollick pointed to a study of Medicaid dental patients in Louisiana, which showed that for every \$1 invested in water fluoridation, the state saw \$38 in reduced dental costs.

To prevent tooth decay, Pollick recommends also brushing twice a day with fluoride toothpaste and reducing sugar levels in diet.