

Australian study shows dental benefits for adults who have lived most of their lives in fluoridated areas

An Australian study published in March 2013 has confirmed the benefits of water fluoridation for adults, showing reductions in tooth decay of between 11% and 30% for adults who have lived all or a large part of their lives in fluoridated areas. (1)

Researchers from the Universities of Adelaide and North Carolina reviewed the dental health of over 3,700 participants in the national survey of adult oral health conducted in Australia between 2004 and 2006, together with residential histories since 1964 and their toothbrushing habits and use of fluoride supplements.

Some of the adults in the study had started to drink fluoridated water when they were born or during early childhood. Others grew up in non-fluoridated areas but had spent some of their adult years in fluoridated areas. Some had never benefited from fluoridation. Individuals' experience varied significantly.

After the residential histories of study participants had been matched with the fluoride levels in community water supplies where they had lived, researchers were able to determine what percentage of their lives had been spent in places with artificial fluoridation schemes in operation.

Analysis of all the data showed that, on average, adults born before 1960 with prolonged exposure to fluoridated water during their lives had 12% fewer decayed, missing and filled teeth than those from the same age group with negligible exposure. The difference was 11% among adults born between 1960 and 1990.

Adults born before 1960

Those who have lived mainly in fluoridated areas were found to have, on average, 12% fewer decayed, missing and filled teeth than those who have lived mainly in non-fluoridated areas.

Those who have lived mainly in fluoridated areas have, on average, 30% fewer decayed and filled tooth surfaces than those who have lived mainly in non-fluoridated areas.

Adults born between 1960 and 1990

Those who have lived mainly in fluoridated areas were found to have, on average, 11% fewer decayed, missing and filled teeth than those who have lived mainly in non-fluoridated areas.

Those who have lived mainly in fluoridated areas have, on average, 21% fewer decayed and filled tooth surfaces than those who have lived mainly in non-fluoridated areas.

The differences were greater when decayed and filled tooth surfaces were compared. Adults born before 1960 with prolonged exposure to fluoridated water during their lives had, on average, 30% fewer decayed and filled surfaces than those with negligible exposure. The difference was 21% among adults born between 1960 and 1990.

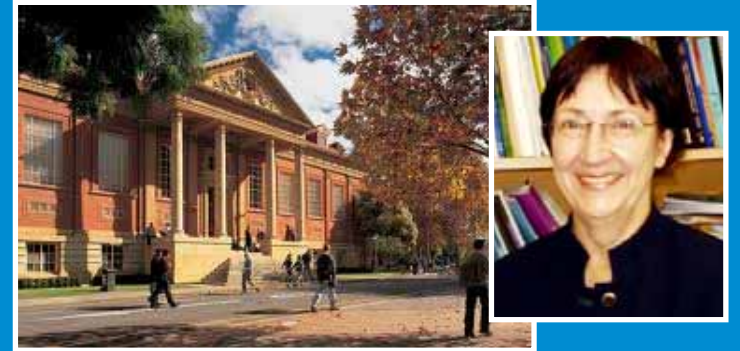
The researchers conclude that, based on this representative sample of Australian adults, greater lifetime exposure to water fluoridation is associated with lower levels of caries experience.

Quoted in a University of Adelaide news release issued on 5th March 2013, Professor Kaye Roberts-Thomson, one of the co-authors of the report published in the Journal of Dental Research, said: “Those people who have had longer exposure to fluoride in water obviously will have the greater benefit. However, and this is an important aspect of the study, even those people who were born before water fluoridation existed have since received some benefit in their lifetimes.

She added: “The evidence is stacked in favour of long-term exposure to fluoride in drinking water. It really does have a significant dental health impact.”

Fellow researcher Professor Gary Slade, speaking from the University of North Carolina at Chapel Hill, concurred. He said: “It was once thought that fluoridated drinking water only benefited children who consumed it from birth. Now we show that fluoridated water reduces tooth decay in adults, even if they start drinking it after childhood.”

1. Slade GD, Sanders AE, Do L, Roberts-Thomson K and Spencer AJ (2013): *Effects of fluoridated water on dental caries in Australian adults*. Journal of Dental Research, published online 1st March 2013.



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University of North Carolina at Chapel Hill