

More Fluoride, More Dentists:

1 August, 1979: A letter from the Secretary of the Victorian Branch of the Australian Dental Association stated, "In a community with a fluoridated water supply, the dental manpower required to maintain a good standard of dental health in a community is always halved."

HOWEVER: The 1976 edition of the C.B.S. News Almanac published figures showing the number of dentists per 100,000 population in 30 "Representative American Cities." Of these 30 cities, 16 were artificially fluoridated. A simple comparison of the fluoridated vs. non-fluoridated cities shows that there were an average of 76.7 dentists per 100,000 population in the fluoridated cities, vs. 59.2 dentists per 100,000 in the non-fluoridated cities. Furthermore, data from the 1971 American Dental Directory, the 1971 U.S. Statistical Abstracts and the 1973 World Almanac reveals that the three American cities which have been fluoridated the longest (Grand Rapids, Newburgh, and Evanston) averaged 121 dentists per 100,000 population, or over twice the national average, after approximately 25 years on fluoridated water. (Data compiled by Phillip R.N. Sutton, D.D.Sc., Melbourne, Australia, 1979)

NEXT:

New Studies Cast Doubt on Fluoridation Benefits

Chemical & Engineering News May 8, 1989

New Studies Cast Doubt on Fluoridation Benefits

by Bette Hileman

An [analysis of national survey data](#) collected by the National Institute of Dental Research (NIDR) concludes that children who live in areas of the U.S. where the water supplies are fluoridated have tooth decay rates nearly identical with those who live in nonfluoridated areas.

The analysis was done by John A. Yiamouyiannis, a biochemist and expert on the biological effects of fluoride, who has been an ardent opponent of fluoridation for 20 years. His results are not widely different from those recently found -- but as yet unpublished -- by [NIDR](#) in analyzing the same data.

In the 1986-87 school year, NIDR examiners looked for dental caries in 39,207 schoolchildren aged five to 17 from 84 different geographical areas. Yiamouyiannis obtained the survey data from NIDR under the Freedom of Information Act.

Yiamouyiannis compared decay rates in terms of decayed, missing, and filled permanent teeth. The average decay rates for all the children aged five to 17 were 2.0 teeth for both fluoridated and nonfluoridated areas. When he omitted those children who had ever changed addresses, and thus confined the study to children with an unchanging fluoridation status, the results were nearly the same -- **a decay rate of 2.0 for fluoridated areas, and 2.1 for non-fluoridated areas**. Decay rates in the individual age groups were sometimes lower in fluoridated areas. sometimes lower in non-fluoridated areas. The differences were never greater than 0.5 teeth. He has submitted his study for publication in the Danish journal *Community Dentistry & Oral Epidemiology*.

He also found that the percentages of decay-free children were virtually the same in fluoridated and nonfluoridated areas, and averaged about 34%. This analysis included both permanent and deciduous (baby) teeth. NIDR's claim that 50% of the children in the U.S. are decay-free, headlined in newspapers across the country last summer, was based largely on the fact that NIDR analyzed only permanent teeth in children aged five to 17, and a large fraction of these children were not old enough to have many permanent teeth, Yiamouyiannis says.

When analyzing the survey data, NIDR compared decay rates in two ways: in terms of the number of decayed, missing, and filled permanent teeth; and in terms of decayed, missing, and filled surfaces of teeth. Both of these methods are widely used today. **NIDR found that children who have always lived in fluoridated areas have 18% fewer decayed surfaces than those who have never lived in fluoridated areas. But when NIDR analyzed the data in terms of teeth, the differences were smaller. Janet A. Brunelle, statistician in the epidemiology program at NIDR, tells C&EN the results for teeth "are in a box somewhere" and she does not remember exactly what they are.**

Brunelle says NIDR is publishing only the results for surfaces because they are more meaningful. Surface rates give a more complete picture of the extent of decay, she adds, and the decay rate for teeth "is rather low so that there is very little difference in most anything." When asked to comment on Yiamouyiannis' results, Brunelle said she didn't know whether they are valid.

In reaction to Yiamouyiannis' new study, the union of professional employees at the Environmental Protection Agency has written a letter to EPA Administrator William K. Reilly. The letter asks him to "immediately suspend (not revoke) EPA's unqualified support for fluoridation" until the agency conducts its own assessment of the risks and benefits of fluoride exposure. The union, Local 2050 of the National Federation of Federal Employees, has been concerned for some time that EPA evaluated fluoride politically, rather than scientifically. The union also believes the safe level of fluoride in drinking water should have been lowered rather than raised in 1986, when EPA increased the maximum allowable contaminant level to 4 ppm from a ranged of 1.4 to 2.4 ppm.

Another analysis of decay rates is published in the current issue of the *American Journal of Public Health*. Jayanth V. Kumar of the New York State Department of Health examined decay rates in seven to 14 year olds in Newburgh, N.Y. which has been fluoridated since 1945, and in nearby Kingston, which has never been fluoridated. He found that the caries prevalence in Newburgh -- 1.5 decayed, missing, and filled permanent teeth -- is somewhat lower than it is in Kingston (2.0). However, since the 1954-55 school year, the decay rate has actually declined more in nonfluoridated Kingston than in Newburgh.

When asked by C&EN, a spokesman for the American Dental Association said that ADA believes that water fluoridation can reduce tooth decay 18 to 25%. But as recently as 1988 the association claimed fluoridation reduces decay 40 to 60%.

See also:

[Yiamouyiannis' Analysis of NIDR Data](#)

[Brunelle & Carlos's Analysis of NIDR Data](#)