

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE

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A STATEMENT ON THE SAFETY OF WATER FLUORIDATION

A summary statement on the safety of water fluoridation, with a supporting bibliography, is enclosed.

We hope this will be useful to you in answering inquiries and working with civic leaders in the promotion of fluoridation.

Community Programs Branch
Division of Dental Health
8120 Woodmont Avenue
Bethesda, Maryland 20014

Enclosure

STATEMENT ON THE SAFETY OF FLUORIDATION

The Division of Dental Health endorses and actively promotes the fluoridation of community water supplies as an effective method of preventing tooth decay. This stand is based on several decades of study of the effects of fluorides.¹⁻⁵ Because of the widespread occurrence of fluorides as a normal constituent of water supplies, research scientists have had a natural laboratory of unprecedented scope.⁶⁻⁸

The first established relationship between fluorides and dental health concerned mottled tooth enamel.⁹⁻¹¹ Culminating investigations that began about 1908, researchers reported in 1931 that persons with noticeably mottled enamel had invariably been reared in areas where excessive quantities of fluoride appeared naturally in the water supply.¹²⁻¹⁴ Those who were studying the mottling phenomenon noticed that mottled teeth, although they were not considered well developed, did not suffer as much decay as teeth that were apparently normally developed.¹⁵⁻¹⁶ This observation led to studies to determine the exact relationship between tooth decay and fluoride in drinking water. Results of these studies and others conducted in several countries were remarkably uniform.¹⁷⁻¹⁹ They demonstrated conclusively that persons born and reared in temperate-climate communities having from 1.0 to 1.5 parts per million of fluoride in the water had only one-third as much tooth decay as persons living in areas where the drinking water was without fluoride.²⁰⁻²¹ Further, at this level of fluoride concentration teeth did not show undesirable mottling.^{4,20} These and other epidemiological findings,²³⁻²⁴ together with the results of animal studies on the caries-inhibiting effects of ingested fluorides,²⁵⁻²⁶ led to the conclusion that fluorides added in optimum amounts to water supplies would result in substantial reductions in the incidence of tooth decay.²⁷⁻²⁹

The early dental investigations were carried out in areas where millions of people had been using naturally fluoridated water throughout their lifetimes, with fluoride concentrations ranging up to 14 parts per million.⁵⁻¹⁹

Later, medical and dental teams also conducted detailed long-term general health studies in high fluoride areas.³⁰⁻³⁹ Though tooth mottling was evident in people from communities having high fluoride concentrations, neither the dental researchers nor the medical teams found any detectable adverse effect on the general health of the population examined.

The evaluation of mortality-morbidity rate data in relation to the use of fluoride-bearing water was another method used in investigating the influence of fluoride ingestion on general health. Both the incidence of selected diseases and the numbers of deaths resulting from them in areas having significant concentrations of fluoride in drinking water have been compared with those in areas having very little fluoride. No patterns were found that suggest any relationship between mortality-morbidity rates and the consumption of fluoride-bearing water.⁴⁰⁻⁴¹

The dental, medical, and statistical evidence has been judged by committees of experts and special councils of national and international organizations concerned with public health.⁴²⁻⁴⁵ Specific allegations of injury or hazard have been carefully evaluated.⁴⁶⁻⁴⁹ The conclusions have been that the adjustment of the fluoride content of water supplies to a concentration optimal for dental health is a safe and beneficial procedure with no detrimental effects of any kind. Long-term health studies in cities having controlled fluoridation, some of them under way nearly twenty-five years, continue to attest to the effectiveness and safety of fluoridation.⁵⁰⁻⁵⁷

In March 1969, Surgeon General William H. Stewart reiterated the position of the Public Health Service by saying:

- "The United States Public Health Service endorses water fluoridation as a safe and effective public health measure and urges all communities to make its benefits available at the earliest possible time."⁴⁹

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