60 Years of Fluoridation in New York State

A compendium of New York State Health Department’s scientific contributions to evaluate the effectiveness and safety of water fluoridation

Bureau of Dental Health  New York State Department of Health

October 15, 2009
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Dear Colleague:

This community water fluoridation symposium is a continuation of the New York State Department of Health’s (the Department) efforts to improve oral health. New York’s commitment to improved oral health began more than six decades ago. The Department recognized early on that a population-based approach predicated on sound science has the greatest potential for controlling tooth decay.

The first fluoride symposium was held in 1945 at the New York Institute of Clinical Oral Pathology to discuss the relationship between fluoride and caries protection. Dr. David Ast, then Assistant Director, Oral Hygiene, Division of Maternity, Infancy and Child Hygiene, New York State Department of Health, first proposed the caries-fluorine hypothesis. Dr. Ast stated, “If this hypothesis can be determined affirmatively, it will indeed revolutionize our thinking and our approach to the solution of the dental caries problem. With conclusive positive evidence, it may be possible to effect mass protection and not have to depend on the individual to do anything about it.” This hypothesis led to a classic epidemiological study, conducted in Newburgh and Kingston that incorporated the principles of a community clinical trial. The study, conducted over a period of 11 years, demonstrated that children from Newburgh, ages six to nine years exposed to fluoridated water throughout their lives, had a rate of decayed, missing and filled permanent teeth (DMF rate) 58 percent lower than the children of Kingston who were not exposed to fluoridated water.

As a result of this and other studies conducted during the 1950s, the addition of fluoride to drinking water to control tooth decay became a public policy in New York State and has been in existence for almost five decades. Since then, numerous investigators worldwide have reaffirmed the benefits and safety of water fluoridation. Researchers at the Department have published over 40 papers addressing questions related to exposure, benefits, safety, cost and impact of water fluoridation. This compendium is a collection of these papers and documents the continuing efforts to evaluate the fluoridation program. This effort represents an outstanding example of applied research in public health. From testing the effectiveness and safety of water fluoridation, to monitoring and surveillance activities, the program demonstrates the Department’s commitment to public health action.

Over the last six decades, New York State has made steady progress in providing access to fluoridated water. At present, about 12.5 million New York State residents, or 72.9 percent of New Yorkers, live in communities with fluoridated water supplies. Although New York is third in the nation in terms of the number of people covered, it still lags behind the Healthy People 2010 objective of providing water fluoridation to 75 percent of the population using public water supplies. To reach this objective, half a million more residents need access to fluoridated water.
There are many challenges to accomplishing this objective. Issues that require attention include the increased cost of fluoridation, communicating the balance between dental caries benefits and minimal risk of enamel fluorosis, the need for updating equipment, competing priorities, and the perception that fluoridation is not needed when alternative caries prevention programs are available. This symposium highlights more recent research that supports the continuation and expansion of the fluoridation program and provides an opportunity to identify future priorities.

I hope you find this information useful in promoting the benefits of water fluoridation, a key public health initiative. I offer my thanks to everyone who has contributed to this important endeavor.

Sincerely,

[Signature]

Richard F. Daines, M.D.
Commissioner of Health
Bibliography