A PUBLIC HEALTH TRIUMPH

At the turn of the 20th century, poor dental health was a major public health concern. The discovery that exposure to fluoride could substantially reduce tooth decay led the U.S. Public Health Service to adopt the fluoridation of public water supplies as an official policy in 1951. With this simple, cost-effective measure, children's teeth would be strengthened for life and adult decay could be arrested or reduced. As of 2006, more than 60 percent of the U.S. population benefited from fluoridated water.¹

Fluoridation

Colorado Brown Stain

McKay thought the stains might be caused by something in the water since all the children drank water coming from Pike's Peak, Colorado. When a similar problem occurred in Oakley, Idaho, in 1923 he recommended that the town drill a new well. The staining disappeared. This confirmed his suspicions, but he lacked the equipment and expertise to test his theory.

Two Heads Are Better

McKay appealed to the eminent dentist G. V. Black to help him find the cause. In 1909 Black (left) and McKay (far right) went to Colorado to study the Colorado Brown Stain. They tested the water and looked at poor diet, radium exposure and childhood diseases.

Science Confirms Fluoride’s Benefit

In 1931, U.S. Public Health Service dentist H. Trendley Dean began to investigate the effect of fluoride on teeth. His team collected data on 7,000 children from Colorado, Illinois, Indiana and Ohio. They discovered that 1.0 mg of fluoride per day reduced tooth decay but higher levels caused the staining and pitting that had first attracted McKay’s attention.

A Curious Condition

In the early 1900s, dentist Frederick McKay began investigating an unusual brown stain on the teeth of children living near Colorado Springs, Colorado, where he practiced. He also noticed that despite the discoloration, children with this condition had fewer cavities.

Grand Rapids—Fluoridation Pioneer

In 1945, the citizens of Grand Rapids, Michigan, agreed to have their water fluoridated as part of a Public Health Service study. These schoolchildren are giving saliva samples for testing. The positive results led cities around the country to add fluoride to their water to improve dental health.


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