



A CUP OF HEALTH WITH CDC

Keep on Smiling

Populations Receiving Optimally Fluoridated Public Drinking Water — United States, 1992–2006

Recorded: July 15, 2008; posted: July 17, 2008

[Announcer] This podcast is presented by the Centers for Disease Control and Prevention. CDC — safer, healthier people.

[Dr. Gaynes] Welcome to *A Cup of Health with CDC*, a weekly feature of the MMWR, the Morbidity and Mortality Weekly Report. I'm your host, Dr. Robert Gaynes.

Thank goodness for the local water department. The inclusion of fluoride in drinking water is considered by CDC to be one of the top 10 public health achievements of the twentieth century. Water fluoridation is largely responsible for the decline in tooth decay in the United States over the past 60 years. Despite its benefits, many communities still don't include fluoride in their water.

Dr. Bill Bailey is a dentist with CDC's National Center for Chronic Disease Prevention and Health Promotion. He's joining us today to discuss fluoride, drinking water, and our teeth. Welcome to the show, Bill.

[Dr. Bailey] It's a pleasure to be here and to be talking about my favorite subject, community water fluoridation.

[Dr. Gaynes] Bill, when did local water systems begin putting fluoride in their drinking water?

[Dr. Bailey] Community water fluoridation began in 1945 in Grand Rapids, Michigan, and there were a series of four community trials across the United States that looked at fluoridating the local water supply and comparing it to a control city that did not fluoridate the water supply. The results were amazing, and from fifty to seventy percent of the dental decay was eliminated in children aged twelve to fourteen years old.

[Dr. Gaynes] Is the decision to fluoridate water locally based?

[Dr. Bailey] Yes. Fluoridation is a state-operated, managed program, and the decisions are made normally at the local level. They can be made by city councils, or it can be, the decision can be made by a vote of the public. Some states have mandatory fluoridation laws that cover the entire state.

[Dr. Gaynes] How widespread is the practice today?

[Dr. Bailey] In 2006, sixty-nine percent of the population on community water systems drink fluoridated water. That's good news in that the percentage of the population with access to fluoridated water has increased. However, thirty percent of the U.S. population on community water systems still does not drink water that's fluoridated.

[Dr. Gaynes] What effect has fluoridation had on the oral health of communities where it is used?

[Dr. Bailey] The food that we eat produces acids that attack the tooth surface, the enamel. This weakens the surface and fluoride, by being there in small amounts throughout the day, helps to strengthen that tooth surface and fight off this attack of the acids from the food we eat. As far as the community's health, fluoride benefits people of all walks of life — young and old, rich and poor — it's almost an ideal public health measure because all you have to do is consume the water. There's nothing to remember, you don't have to take a pill, you don't have to go see a practitioner. Just by using the water, it helps to strengthen the surface of the tooth and fight tooth decay. We know now that, for example, older people have as much new tooth decay as young people and more untreated decay. So fluoridation is not just for kids. Fluoridation helps everyone. It's an equitable and very cost-effective measure. In fact, we know that fluoridation actually saves money. For every dollar we spend on fluoridation, at least thirty-eight dollars is saved in dental treatment costs.

[Dr. Gaynes] Why don't all communities add fluoride to their water?

[Dr. Bailey] There are three main reasons — the first of which is that decision makers and the public don't always understand that tooth decay is a significant public health problem. But it is. It affects over one in four children that are younger than six; it affects nearly six out of ten adolescents, and for people who are twenty years or older, over nine out of ten people have experienced tooth decay. And in some population groups, it's a much more substantial problem. The second reason that not everyone has fluoridated their water is people don't always understand that their water's not fluoridated. They just assume that it is, so we encourage everyone to know the fluoridation status of their water, and if it's not fluoridated, ask questions as to why it's not and try to see if there if some action can be taken to get your local water supply fluoridated. Lastly, there's a vocal minority of opponents that fight fluoridation. However, sixty years of research has shown that there's no persuasive evidence that points to any harm from community water fluoridation.

[Dr. Gaynes] Where can listeners get more information about water fluoridation?

[Dr. Bailey] We have a website with lots of information about community water fluoridation. It's www.cdc.gov/fluoridation.

[Dr. Gaynes] Bill, thanks for sharing this information with our listeners today.

[Dr. Bailey] It's been a pleasure, and if you want more information, please see our website.

[Dr. Gaynes] That's it for this week's show. Be sure and join us next week, but until then, be well. This is Dr. Robert Gaynes for *A Cup of Health with CDC*.

[Announcer] For the most accurate health information, visit www.cdc.gov or call 1-800-CDC-INFO, 24/7