



TO: Richard C. Rossi, City Manager
FROM: Claude-Alix Jacob, Chief Public Health Officer
CC: Sam Lipson, Director of Environmental Health, CPHD
Sam Corda, Managing Director, Cambridge Water Dept.
DATE: September 3, 2014
SUBJECT: Response to Policy Order #12, adopted 7/28/14

Excerpt of Order: That the City Manager be and hereby is requested to work with community experts, local universities and the Cambridge Water Department to produce a research study determining the risks and benefits of the effects of continuing to fluoridate the city's water supply; and be it further that the City Manager be and hereby is requested to report back to the City Council on this matter.
[For full text: See appended document]

The recent inquiry from City Council regarding the safety of the city's community fluoridation program is not isolated to Cambridge or to this point in time. Skepticism about the relative benefits (or the assessments of risk) of community water fluoridation has been ongoing since this landmark public health policy was introduced by the U.S. Public Health Service in the 1950s.

In response to a surge in opposition to community water fluoridation in the past few years, several water districts in the U.S. have recently opted to forgo fluoridation of the public water supply. The Cambridge Public Health Department believes it is important that communities served by water fluoridation understand the basis for the policy and thereby avoid making decisions that yield to current temperament or trend.

From a community perspective, it is reasonable to question a policy, like water fluoridation, that is applied universally and without specific consent of individual residents. The city's public health system is only strengthened by greater involvement of residents in offering their input and perspective on public health issues.

As most people familiar with the fluoridation issue are aware, the Centers for Disease Control and Prevention (CDC) and the broader scientific community have been steadfast in their support of community water fluoridation, considered one of the crowning public health achievements of the 20th century.

Statements from the CDC, like the one below, clearly convey the view of the nation's top public health agency:

The safety and effectiveness of fluoride at levels used in community water fluoridation has been thoroughly documented by scientific and public health organizations using scientific reviews and expert panels. These expert panels consist of scientists from the United States and other countries with expertise in various health and scientific disciplines, including oral health, medicine, biophysics, chemistry, toxicological pathology, and epidemiology. Experts have weighed the findings and the quality of the available evidence and found that the weight of peer-reviewed scientific evidence does not support an association between water fluoridation and any adverse health effect or systemic disorders. Available at: <http://www.cdc.gov/fluoridation/faqs/index.htm#overexposure7>



As noted in the CDC statement, human risk associated with fluoridation has been studied through laboratory animal investigation and environmental epidemiology research on many occasions and these studies have been evaluated based on their strength of association with adverse outcomes, study design, and feasibility of the hypothesized mechanism of adverse effects.

While there is always some degree of uncertainty in scientific research on human health, in the case of community water fluoridation this uncertainty is very small. The primary risk associated with this activity is the accumulation of excess fluoride in bone and skeletal tissue, a condition known as fluorosis. Fluorosis has been most clearly demonstrated in areas with extremely high naturally-occurring fluoride in the local water supply.

In Cambridge, the level of naturally-occurring fluoride in the city's water sources is extremely low. Cambridge maintains the fluoride concentration of the treated public water supply at the CDC-recommended concentration of 1.0 parts per million and the final concentration of fluoride in the Cambridge drinking water is carefully calibrated.

The city began fluoridating the water supply in 1974, and its commitment to the fluoridation program has been unwavering. In the view of the Cambridge Public Health Department, the fluoridation of the city's water supply has brought significant public health benefits to the community in the ensuing decades. The major benefits have been the reduction of tooth decay and the associated health effects from the bacteria responsible for this damage. A large body of more recent research has clarified the role of bacteria associated with dental decay in other systemic chronic illnesses such as endocarditis (inflammation of the heart valves), adding further importance to the maintenance of good dental health.

Notwithstanding the impressive evidence to support claims of positive public health outcomes and the paucity of evidence to implicate fluoridation at the levels recommended by the CDC and strictly observed in Cambridge, the Cambridge Public Health Department plans to arrange a meeting by November 2014 with community members who have expressed concerns about community water fluoridation. The meeting will be an opportunity to:

- Review and discuss the available research on community water fluoridation.
- Understand how the city evaluates the benefits and risks of community water fluoridation in the context of very low naturally occurring fluoride levels in the city's water sources.
- Discuss the overall rationale for the city's fluoridation policy.

For this meeting, CPHD expects to call upon local scientific and clinical experts who bring a range of views to this issue, and we anticipate a valuable and lively discussion.

Following this meeting, if it is determined that further discussion is needed, CPHD will work with community members and city partners and to outline next steps.

CITY COUNCIL

Policy Order Resolution

O-12
AMENDED ORDER
IN CITY COUNCIL

July 28, 2014

COUNCILLOR MAZEN

- WHEREAS: Water fluoridation is the practice of adding industrial-grade fluoride chemicals to the public water supply for the purpose of preventing tooth decay; and
- WHEREAS: The Cambridge Water Department has fluoridated its public water supply at a level of 1.0 ppm for more than 20 years; and
- WHEREAS: Most developed countries besides the United States, including 97% of western Europe do not fluoridate their drinking water; and
- WHEREAS: Comprehensive data from the World Health Organization reveals that there is no discernible difference in tooth decay between the minority of western nations that fluoridate water, and the majority that do not; and
- WHEREAS: Fluoride is classified by the FDA as a drug, not a nutrient, with many side effects and known neurotoxicity and therefore it is not appropriate to add to a city's water supply; and
- WHEREAS: Fluoride's main benefit comes from topical contact with teeth and not from ingestion, and many large scale meta-studies have shown no statistically significant difference in the cavity rates of individuals in fluoridated or non-fluoridated areas; and
- WHEREAS: More than 33 studies have reported an association between fluoride drinking water concentration and reduced IQ; now therefore be it
- ORDERED: That the City Manager be and hereby is requested to work with community experts, local universities and the Cambridge Water Department to produce a research study determining the risks and benefits of the effects of continuing to fluoridate the city's water supply; and be it further
- ORDERED: That the City Manager be and hereby is requested to report back to the City Council on this matter.