

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE

NATIONAL INSTITUTES OF HEALTH

Refer to: PS, CPB-5
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FLUORIDATED WATER DOES NOT CAUSE CORROSION

Frequently communities are confronted with anti-fluoridation arguments of alleged corrosion (and water main or plumbing damage) caused by fluoridated water. A number of specific cities have been singled out as examples of such problems.

Persons working for fluoridation should know in advance that the facts do not support the allegations. The enclosure consolidates extracts from statements of competent National and specific local and State water authorities refuting all such usual claims of alleged corrosion or damage.

Community Programs Branch
Division of Dental Health
National Institutes of Health
Bethesda, Maryland 20014

R-10-70

FLUORIDATED WATER DOES NOT CAUSE CORROSION

THE AMERICAN WATER WORKS ASSOCIATION SAYS:

"It may be stated categorically that the modification of chemical characteristics in the public water supply, treated with 1 to 1.25 parts per million of fluoride containing materials, does not increase or decrease the corrosivity of the water."

THE NATIONAL ASSOCIATION OF CORROSION ENGINEERS SAYS:

"The effect of fluorides, if any, on the corrosion rate of water system metals, when present in the concentrations normally required for caries control, is so small that it cannot be measured."

THE NEW YORK UNIVERSITY COLLEGE OF ENGINEERING RESEARCH DIVISION SAYS:

Reporting on a survey of fluoridation practices in 20 major U.S. cities: "In no instance is any pipeline corrosion traceable to the fluoride content reported."

CAST IRON PIPE RESEARCH ASSOCIATION SAYS:

"...our research has been limited to observation of cast and ductile iron pipe in service and exposed to fluoride in range of 1 to 1.25 parts per million. In several locations, we have also been able to observe these products which are exposed to naturally occurring fluorides in water somewhat exceeding this range."

"In no case have we observed any corrosion attack or other effect of fluorides on cast iron or ductile iron pipe in this range of concentration. It is our opinion that these pipe materials can be used in water supplies where fluoridation is practiced, and that no concern of potential corrosion is warranted."

NORTHWEST SECTION, AMERICAN WATER WORKS ASSOCIATION, SAYS:

"In reviewing these reports (detailed information on fluoridation installations in British Columbia, Oregon, Idaho, and Washington gathered annually since 1958) and in personal conversations with water department officials, we have found that no unusual corrosion or plumbing problems have occurred in the distribution system after the start of fluoridation that were not present before it began. This is in accordance with direct correspondence we have had with other large cities throughout the United States."

SPECIFIC CHARGES OF ALLEGED CORROSION BY FLUORIDATED
WATER REFUTED BY LOCAL AND STATE WATER AUTHORITIES

CONCORD, NEW HAMPSHIRE

"With regard to the replacement of water pipes, this has always been required in Concord because of the high corrosive action of the water itself. No increased frequency of replacement was noted during the period of fluoridation." "The build-up of deposits in the mains is a long-standing problem in Concord that predates fluoridation by many years."

Bureau of Sanitary Engineering
New Hampshire State Department of Health

FULTON, NEW YORK

"At Fulton... there was absolutely no connection between the corrosion of water meters and the addition of fluoride."

New York State Department of Health
Water Supply Section

WILMINGTON, MASSACHUSETTS

"The natural pH of the Wilmington water is about 6.2. Corrosion in the distribution system occurs as you would expect. In this regard please note that Mr. Sargent's public letter did not state directly that fluorides were the cause of corrosion in the Wilmington distribution system. Such, of course, could not be true."

Commissioner, Department of Public Health
Commonwealth of Massachusetts

RIVERHEAD, NEW YORK

"The problems of the Riverhead Water District are in no way related to the addition of fluoride compounds to the water supply." "The addition of fluoride compounds in the dilute concentrations and by the refined engineering techniques in common practice cannot possibly have a detrimental effect on the water supply system."

Bureau of Water Resources Services
Department of Health, State of New York

SAN FRANCISCO, CALIFORNIA

"We have not had any leaks or breaks that could be remotely attributed to adding fluorides to the water supply."

Public Utilities Commission
City and County of San Francisco

MIAMI, FLORIDA

"No plumbing damage due to fluoridation has ever been demonstrated here."

Acting Director
Dade County Department of Public Health

"Reference is made to our statement of February 22, 1957, ...pertaining to a corrosion and leakage problem encountered in hot water heaters in our area. The cause of this water heater corrosion problem is not known at the present time. It was never intended that the above mentioned statement should be used in relation to the fact that the Miami water is fluoridated... ...in the statement, no cause for corrosion is mentioned."

President, Miami Water Heater Company
Miami, Florida

NORTH ANDOVER, MASSACHUSETTS

"There is no valid evidence whatever to support the influence of fluoridation in the loosening of such products of corrosion. Nor does fluoridation cause the corrosion in the first place. (The laundry operator) was complaining to the authorities about the stain of laundry years before North Andover fluoridated its water supply. The Division of Sanitary Engineering investigated these complaints and found adequate other reasons for the corrosion of (the laundry's) pipes."

Sanitary Engineering Division
Massachusetts Department of Public Health