



A/C Pipe
Producers Association



Internal Correspondence

TO: Public Affairs Committee
International Affairs Committee

FROM: *J. F. Welch*
J. F. Welch, Director, Public Affairs

DATE
March 26, 1981

SUBJECT:

Environmental Protection Agency - Kanarek Study on Asbestos in Drinking Water

ACTION REQUIRED: Review for information and dissemination

During the hearings on industry's petition for a declaratory ruling on the safety of A/C pipe in Connecticut, J. Wister Meigs, M.D. (Yale University of Medicine) and Ian T. Higgins, M.D. (University of Michigan School of Public Health) stated that the conclusions of the Kanarek study were seriously flawed because the researchers did not control for population density factor. Dr. Higgins explains the impact of this shortcoming in the enclosed letter to the editor of the American Journal of Epidemiology, which published the Kanarek study last year.

AACPP plans to distribute this information to state health departments and water utilities via a "health facts"-type bulletin. If you have any questions, please do not hesitate to call.

JFW/ajb

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March 11, 1981

The Editor
American Journal of Epidemiology
550 N. Broadway, Suite 201
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I should like to draw your readers attention to a serious flaw in the paper by Kanarek and his colleagues (1), which invalidates their conclusion that there may be a causal connection between asbestos fibers in drinking water and cancer. In reaching this conclusion, they apparently ignored the well known association between cancer and population density. Review of Kanarek's doctoral thesis (though not of the paper in the Am. J. Epid.), shows that high fiber concentrations were concentrated in two main areas: San Francisco County (or City) and San Mateo County. The highest concentrations were in San Mateo County. If digestive tract cancer death rates in San Francisco are compared with the State of California, it is apparent that the rates are, as expected, higher in San Francisco (Table 1). This cannot, however, be attributed to the asbestos fibers in the drinking water. If New York City is compared with New York State, similar differences are observed. Unlike San Francisco, New York City does not have high fiber counts in the drinking water (2). It is clear that the fiber/cancer association is confounded by the density of population factor. The importance of population density in assessing the relationship between asbestos fibers in drinking water and cancer has been well shown by Meigs and his colleagues (3, 4).

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Unfortunately, conclusions are being drawn from this study that asbestos fibers in drinking water may be a cancer hazard. All the evidence is against this conclusion and theoretical considerations make the hypothesis unlikely. A similar study conducted by Severson in the Puget Sound area (5), has reached negative conclusions. though it might be noted that here, ignoring population density made it appear that fibers in drinking water were actually good for you.

REFERENCES

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2. United States Environmental Protection Agency. Millette JR, Clark PJ, Pansing MF. Exposure to asbestos from drinking water in the United States. EPA 1979;600/1-79-028.
3. Harrington JM, Craun GF, Meigs JW, et al. An investigation of the use of asbestos cement pipe for public water supply and the incidence of gastrointestinal cancer in Connecticut, 1935-1973. Am J Epidemiol 1978; 107:96-103.
4. Meigs JW, Walter SD, Heston JF, et al. Asbestos cement pipe and cancer in Connecticut, 1955-1974. J Env Hlth 1980;42:187-191.
5. Severson RK. A study of the effects of asbestos in drinking water on cancer incidence in the Puget Sound Region, thesis for M.S. degree, Biomathematics Group, University of Washington, Seattle, Washington, 1979.

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Table 1

Comparison of Age Adjusted Rates for White Men and Women 1950 to 1969
for Various Digestive Tract Cancers in
San Francisco County (= City) and New York City With the
States of California and New York and the United States

	Esophagus		Stomach		Colon		Rectum		Biliary Passages and Liver		Pancreas	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
San Francisco County (= City)	7.5	1.8	20.3	9.8	18.9	16.7	10.6	6.6	5.5	4.9	11.0	7.1
California												
State	4.0	1.2	14.4	7.2	14.6	14.2	7.2	4.7	4.4	4.4	9.8	6.0
New York City	6.2	1.7	21.8	11.9	24.3	21.1	13.0	7.6	6.5	6.4	11.5	7.5
New York State	5.4	1.4	18.5	9.8	21.7	19.6	11.5	6.8	5.5	5.6	10.6	6.7
U.S.	4.1	1.0	15.2	7.7	16.5	16.3	7.7	4.8	5.2	5.3	9.6	5.8

Jason TJ, McKay FW. U.S. Cancer Mortality by County: 1950-1969.
NIH Publication (NIH) 74-615. U.S. Government Printing Office,
Washington, D.C. 1973.