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CANADIAN DEPARTMENT OF NATIONAL HEALTH AND WELFARE RELEASES ASBESTOS IN DRINKING WATER RESULTS

Results of a Canadian government study[1] show no consistent increased cancer deaths for persons living in localities where high levels of asbestos are present in drinking water.

Asbestos is an important mineral commodity in Canada. Although it occurs naturally in many parts of the country, its mining is concentrated in the Province of Quebec. The presence of asbestos in municipal water supplies prompted the Department of National Health and Welfare to survey the asbestos content of Canadian drinking water. Samples of raw, treated and distribution water were collected from seventy-one locations. These were analyzed according to the U.S. Environmental Protection Agency (EPA) interim procedure for determining asbestos content of water. The results then formed the basis of an epidemiological study.

The sampling portion of the study concluded that chrysotile was " ... the major asbestos type present in drinking water with some 5% of the population receiving water with asbestos concentrations greater than 10×10^6 (10 million) fibers per liter." The median fiber lengths were between 0.5 and 0.8 micrometers. Where very long fibers (up to 50 micrometers) were observed, these did not form a majority of the fibers present.

The epidemiological study analyzed the relationship between mortality (death) rates and asbestos levels in drinking water. The seventy-one sampled cities were divided into two exposure groups — those with levels greater than 100 million fibers per liter and those with less than 5 million fibers per liter. Within these two groups, death rates from

various causes were compared. The study concluded:

> Although there are serious limitations to this type of study, no consistent increase in mortality rates for any cancer was demonstrated. This finding is consistent with the previous, but more limited, epidemiology study carried out in Quebec.

The study to which the authors referred also was conducted by the Canadian Department of National Health and Welfare[2]. It involved an investigation of municipalities in the asbestos mining regions of Quebec where populations were exposed to asbestos levels as high as 1.3 billion fibers per liter of drinking water. That study concluded:

> A study of twenty-two municipalities in Quebec did not reveal excess cancer mortality that could be related to the presence of asbestos fibers in drinking water supplies.

REFERENCES

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2. Wigle, D. T., "Cancer Mortality in Relation to Asbestos in Municipal Water Supplies," Archives of Environmental Health, 185-189, 1977.