



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE



NATIONAL CENTER FOR
HUMAN AND INDUSTRIAL HEALTH
EAST CENTRAL PARKWAY
CINCINNATI, OHIO 45202

REFER TO:

December 7, 1967

Johns-Manville Company
22 East 40th Street
New York, New York 10016

Gentlemen:

We have had an inquiry from a local health officer about the carcinogenic effect of asbestos from A-C pipe in drinking water.

We will decide about the effects of ingested asbestos, but would like to know if you have any data about the amount of asbestos that might occur in drinking water. How much is introduced during pipe repairs and tapping? Does solution of the calcium out of the cement into the water release asbestos fiber? Do you know anything about a report "-that near Memphis, Tennessee, there was a period in one locality where the pH in the water was 10 or 11 and this resulted in a solution in the cement component of the pipes to such an extent that the water became milky-" that we have been asked about.

I will appreciate your comments on this problem.

Sincerely yours,

Leland J. McCabe
Chief, Disease Studies
Water Supply and Sea Resources
Program

PNEUMOCONIOSIS RESEARCH UNIT

Visit by Medical and Science Correspondents
Wednesday, 22nd February, 1967

ASBESTOS AND CANCER

It is now accepted that there is an association between exposure to asbestos dust and the development of certain cancers. These are cancers of the lung and mesotheliomas of the pleura and peritoneum. There is evidence that there is an increased incidence of cancers of the gastro-intestinal tract; this has been produced by German and American investigators. The cancers of the lung occur in workers with severe asbestosis - fibrosis of the lung due to asbestos dust. In contrast to this the mesotheliomas can occur in people with minimal fibrosis and, in some cases, asbestos is found in the lungs but insufficient to cause any scarring of the lung tissue. In these people the exposure to asbestos dust is relatively slight, and may be as little as three months. In some cases, the exposure has been environmental, not occupational. The time between the exposure and the development of the tumour is usually more than thirty years. These diseases are due to the inhalation of asbestos dust. There is no known danger through drinking water from asbestos pipes, or beer that has passed through asbestos filters.

Asbestos is a generic term applied to a number of fibrous silicates. Four types of this material are, and have been, used commercially in Britain. These are chrysotile, crocidolite, amosite and anthophyllite. Chrysotile is by far the commonest type, the total world annual production being more than 3,000,000 tons; the main sources are the Soviet Union, Canada, South Africa, and Cyprus. Crocidolite (blue asbestos) is mined in South Africa and until recently in Western Australia - the annual production is about 150,000 tons; the amount imported into Britain has been reduced in recent years, and is now 7,500 tons. Amosite is found only in South Africa where 100,000 tons are produced annually, the use of this fibre is increasing in Britain and about 30,000 tons was brought in last year. Anthophyllite is mainly produced from a small mine in Finland, with an annual production of 15,000 tons; only a small amount of this is used in Britain. About 500 cases of cancer of the lung and mesothelioma are known to have occurred among people exposed to asbestos dust in the United Kingdom. This is hardly significant when one realises that more than 25,000 cases of carcinoma of the lung are diagnosed each year.

On current evidence from South Africa, Australia and Britain, it would appear that crocidolite is mainly implicated in the development of the mesotheliomas. However, cases have occurred in the United States, Canada and a few in Britain in which the people concerned appear to have only been exposed to chrysotile. The major problem at the moment is to establish whether only one type of asbestos is responsible for the development of these tumours, and if other varieties can be exonerated. Exposure to only one type of asbestos is unusual in a manufacturing country such as Britain, therefore to find populations exposed to a single type of asbestos, surveys have to be undertaken in the mining areas. It is also hoped that information obtained from animal experiments may be valuable in the assessment of this hazard.

Members of the staff of this Unit have played a prominent part in the discovery and investigation of the association between mesotheliomas and exposure to asbestos dust. They were concerned in the original definition of the condition in South Africa, its recognition in Britain, and the development of the international research programme which is now in operation.

JCW/Y
16.2.67

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