

**PLAINTIFF'S
EXHIBIT**

TN-554

Dr. S. Holmes

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To: SHM/COT
Copy: WPH
HCL

13th May, 1976.

Cancer from Asbestos

Dr. H.C. Lewinson has made a number of changes to the document forwarded with your note of 6th May. He has since discussed the changes with me and obtained my agreement to them. I enclose our proposed amended version herewith. -}

S. Holmes.

Enc.

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THE ASBESTOS INFORMATION COMMITTEE

10 MAY 1976

Memo to: AIC Sub Committee

Thursday
6th May
1976

cc. SH/HCL

From: Mr W P Howard

I enclose herewith the draft of some questions and answers which Mr Cross proposes should be produced by the AIC. I shall be grateful for your comments.

W.P. Howard

W P HOWARD
SECRETARY

WPH/JG
Enc

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CANCER FROM ASBESTOS?

Q Does asbestos give you cancer?

A It is extremely unlikely. If you are a heavy smoker and have developed asbestosis after working with asbestos for a number of years in very dusty conditions - before the Asbestos Regulations 1969 came into effect - you may develop lung cancer. In recent years there have been about 80 such cases reported each year, compared with 30,000 a year due to smoking cigarettes.

There is another type of cancer, also very rare, called mesothelioma, for which, since 1966, asbestos has been believed to be one of the causes. 1989

Q What is mesothelioma?

A It is a malignant tumour which affects the pleura, the lining of the chest wall, or the peritoneum, the lining of the abdominal cavity where the stomach lies.

Q How rare is this mesothelioma?

A Dr Greenberg, of the EMAS, has estimated that there are about 200 cases a year at present, of which % are in the pleura and about % in the peritoneum. These compare with deaths from cancer from all causes reported annually in the U.K. Included in the EMAS survey % are listed as "possibly" due to casual, public, exposure. (No asbestos?)

Q Why is asbestos thought to be a cause of mesothelioma?

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A In 1966, Dr Wagner reported an untypical group of this rare cancer in the Cape Province of South Africa. Looking for some common circumstance which might have contributed, he observed that these cases had occurred in an asbestos mining area. Knowing of the risks of asbestosis, Dr Wagner investigated further and found that all the persons concerned had either worked with asbestos or otherwise inhaled asbestos dust over a number of years in that arid climate.

Subsequent studies in other places showed that more cases of mesothelioma than would normally be expected had occurred in situations where a high possibility of inhaling asbestos fibres had existed for some years - that is, in and around asbestos factories and in places, such as ship building and repair yards where unusually high use of asbestos materials had been used in very dusty conditions.

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Q How do you account for the reported cases of mesothelioma in people with very slight contact with asbestos?

A It is accepted by the most expert of independent researchers that mesothelioma must be caused by other factors than asbestos, since for many years cases have been reported where there is no possibility of asbestos being involved. In all investigations, there are found to be a large proportion of recorded cases where there is a clear history of exposure to asbestos dust. There is always a group (varying from 10% to 30%) where it is clear that asbestos was not present. In between these two groups there is an area where a "possible" (though not probable) opportunity of inhaling asbestos fibres has been suggested, such as in "home handyman" work sawing asbestos boards or even being related to an asbestos worker.

Q Shouldn't such a possibility be taken seriously?

A Of course. That is why so much effort has gone into endeavouring to establish just what connection can be proved between asbestos and the reported cases. Every possible connection, however conjectural, is sought out. Unfortunately, in such cases the information available is very subjective and unreliable. First, it is acknowledged that diagnosis of mesothelioma is very difficult. In the U.K. this difficulty is now appreciated, and the medical profession tries to reduce the possibility of wrong diagnosis by relying on the assessment of post-mortem material by a panel of five pathologists with specialised expertise. Only if a majority of these experts confirms it is the case concerned accepted as a mesothelioma, and where there is not unanimity, the "benefit of the doubt" is given in favour of the mesothelioma.

In those confirmed cases of mesothelioma, except in those where well established occupational exposure is known to have occurred, evidence of possible exposure is hard to establish. It is usually possible to obtain only the briefest and most tentative information of the occupational history over the life time of the deceased from friends or relatives. It is well known how uncertain a person's own memory can be - few of us possess the capacity for detailed total recall over a life time (the relevant period for a damaging exposure to have occurred is 15 to 50 years ago).

Q Even so, does not this indicate that some people may get cancer by slight exposure?

A The cases of mesothelioma where unquestionably exposure to asbestos is a contributory factor relate to conditions in factories many years ago, or usually 30 to 40 years ago, or more recently from people engaged in such occupations as lagging or spraying, before control methods were effectively developed or the Asbestos Regulations 1969 required precautions to be taken in those occupations.

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Even under these conditions, where regular occupational exposure to dust levels many times higher than those stipulated as safe today must have occurred, the percentage of people developing mesothelioma is small. The great majority have not been affected. If such is the case when such relatively high exposure has been experienced, common sense suggests that the extremely small amounts of dust, often almost undetectable, which might be encountered by the general public in its normal use of asbestos products in the home or daily life, is unlikely to be a danger.

Q Why is it suggested that blue asbestos is particularly harmful?

A Dr Wagner's original reports referred to cases in a mining area where the type of asbestos mined was blue (crocidolite). A similar incidence of mesothelioma has not been found in other mining areas, including those in Transvaal, where crocidolite has also been mined for over 50 years.

Subsequent attempts to determine if mesothelioma occurs with exposure to blue asbestos in manufacture or use has been made; difficult because in almost all asbestos factories, more than one type of asbestos is used. In a majority of the reported cases where asbestos is believed to have been a clear cause, blue asbestos has been present, but it is also significant that in all of these cases, the exposure levels have been very heavy. By its nature, blue asbestos has been very suitable for insulation products, which have tended to be in such a form as to be dusty in manufacture and use - for example, textile manufacturing, insulation mattresses, sprayed asbestos insulation.

In use and manufacture of asbestos cement products, which today, other than in the UK, represents the main use for blue asbestos, there is no evidence of an increased risk of mesothelioma.

Q Why then are special precautions necessary?

A Whether special precautions are necessary is possibly a matter for debate - experts in some other countries, notably the U.S.A, do not accept this - but the Asbestos Regulations 1969 in the UK do specify certain extra precautions where blue (crocidolite) asbestos is concerned, and so the law must be observed. Some other European countries have followed the British form of regulation in this as they have in all other aspects of asbestos control.

The reason the UK authorities made these special provisions was that, at the time the new Regulations were being formulated, the recognition of mesothelioma had been mainly in association with the blue mining areas, and crocidolite use in this country was relatively insignificant and confined to particularly dusty operations not easy to control. Accordingly, in view of the uncertainty, extremely stringent requirements were proposed and the UK asbestos industry, (which had no need for technical reasons for crocidolite for asbestos cement manufacture) saw no particular problem in accepting these.

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In the light of knowledge obtained in the last ten years, there is no doubt that a very different view would be taken if such additional or selective measures were proposed during the formulation of regulations.

Q Is the present standard of 2 fibres per milliliter adequate for the prevention of mesothelioma?

A Since the undisputed cases of mesothelioma appear to have related to exposure to much higher levels, and only a small proportion of people exposed to such high levels have developed this tumour, it is believed that it is a safe standard.

As stated earlier, it takes 25 to 40 years for harmful exposure to produce this effect. The effect of the improved controls under the 1931 Asbestos Industry Regulations has already resulted in clear improvement in prevention of all asbestos related disease, and the greatly improved control standards, including the establishment of a standard for dust concentrations and methods of measurement are to be expected, as Dr M Newhouse predicted at an International Occupational Health Conference in Brighton in September 1975, to eliminate mesothelioma as far as it is possible to forecast a total result, when sufficient time has elapsed to exclude all those not subject to such improved regulations.

More work is naturally involved in controlling dust to the 2 f/ml level when the operations concerned are dry or otherwise "dust conducive", and it is in this direction that greater effort is required rather than in the setting of tighter levels, based on arbitrary judgments unrelated to the scientific data available.

(WPH comment: Dr Newhouse must be asked to comment on this answer)

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