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HYGIENE STANDARD FOR CHRYSOTILE ASBESTOS

SIR,—Mr Peto (March 4, p. 484) makes an unjustified assumption in his estimates of the dust exposure of men employed before 1951. Before 1951 we had no knowledge of the dust exposure of any department. Between 1951 and 1961 in our factory we counted dust particles and not fibres, and only after 1961 did we count fibres by modern membrane filter methods, the techniques for which have since been considerably refined.

Rickards et al.[1] have correlated particle-counts in today's factory environment with static membrane filter counts. Their findings indicate that the average fibre-count for this factory in 1952 would have been 25 (range 12–80) fibres/ml. Between 1946 and 1952 considerable efforts were made to improve methods of handling asbestos and air extraction. It would be reasonable to assume that ambient fibre levels in the period 1936–46 were at least twice those in 1952, (i.e., 50 fibres/ml, with a range of possibly 20–200). It is clearly very difficult to correlate dust levels with disease using data extrapolated back in time. This attempt can only be made with data obtained since 1951, and, whilst I appreciate that 25 years is too short a time to draw conclusions about carcinoma of the lung, we can more accurately derive a standard which will protect from asbestosis. If Peto's assumptions are correct the same standard should give a high degree of protection from lung cancer to the smoking asbestos worker.

In an analysis of the 1951–76 cohort I have found 11 cases of lung cancer and these men had had an average exposure of 260 fibre-years/ml. This is well above the present standard of 100 fibre-years for a working life of 50 years (observed/expected 0·93).

Mesothelioma can be caused by chrysotile alone, but the risk has generally been found to be much smaller than the risk of men exposed to crocidolite or a mixture of crocidolite and chrysotile (50–1). All the men in the cohort referred to by Peto had also been exposed to crocidolite; no one can say in what proportions or to what quantities. This will, I hope, counter Peto's calculations of the relative risks of crocidolite versus chrysotile in mesothelioma pathogenesis. The use of five cases for such calculations could be most misleading.

I agree with Peto that further epidemiology, better dust data, and electron microscopy in both dust counting and post mortem work is urgently needed so that we can base our judgments on firmer ground.

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J. G. MORRIS

1. Rickards, et al.???????

A: ?

A ? No added does this refer

A ? not clear

A: ?

c.c. S. Marks
R. Sykes

JGM/VMT

Mr. J. Peto,
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21st March, 1978

Dear Julian,

I felt I should write a short explanatory letter to the Lancet on one or two points in your article dated 4th March, 1978 page 484. I am enclosing a copy, and hope you will take this in the spirit intended, not of criticism.

I see from the Conference programme of the New York Academy of Sciences that you are to give a paper on the afternoon of June 24th with Geoffrey Berry. Reg Sykes and I would like to meet you in Oxford before the New York Conference and we will be in touch with you to arrange a date convenient to all and perhaps we could also arrange to meet Sir Richard for lunch or dinner at the same time. What we would really like to discuss is the recent update of our data incidence of adverse effect versus disease and I will let you have a copy of the data in the near future.

Yours faithfully,

J.G.Morris, MB, ChB, MRCS, LRCP,
DCH, DPH, DRCOG, MRCGP, AMBIM, FRSH.
Chief Medical Officer