THE ASBESTOS INFORMATION COMMITTEE

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Dear Jack,

I enclose herewith a copy of an article which Turner & Newall will be publishing in its management Digest in about three weeks time. In sending it to you I should emphasize that it is for private circulation only.

Yours sincerely,

W. P. Howard,
Secretary

WPH/JN

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Television and the 2 fibre asbestos standard

A recent Granada "World in Action" programme challenged the validity of the "2 fibre" standard associated with the British Asbestos Regulations, which govern conditions in T&N asbestos factories, and indeed all work of any kind with asbestos products in the United Kingdom. The general drift of the programme was extremely misleading, and it is well to know the reasons why.

The Standard recommended for use by H M Factory Inspectorate in applying the 1969 Asbestos Regulations is largely based on a report of the British Occupational Hygiene Society on Hygiene Standards for chrysotile asbestos dust. The BOHS based their findings on the health of a group of 290 male asbestos textile workers at TBA in Rochdale on 30th June 1966, all of whom had been employed in "scheduled areas" at TBA for over 10 years since 1st January 1933. The cumulative asbestos dust levels at various processes were then related to the medical history of the groups of workers who had been employed in them.

The TV programme gave the impression that the BOHS sub-committee based their findings on a study of the x-rays of these workers. In fact they discarded the x-rays and based their findings on the earliest clinical symptoms of disease. If x-rays had been used to determine the standard it would have been less stringent.

What is relevant is the fact that in those areas of the TBA factory where we know the asbestos dust concentrations to have been about 2 fibres/ml (i.e. about the level of the standard), for many years, there has been no abnormal medical history.

Actually the BOHS did not produce a "2 fibre" standard at all. What they did was to produce a 100 fibre year standard. This can be expressed in various ways, e.g. to run a 1% risk of incurring the earliest clinical signs of asbestosis,

at a concentration of 2 f/ml a man has to work for 50 years
= 2 x 50 = 100 fibre years/ml

at a concentration of 4 f/ml a man has to work for 25 years
= 4 x 25 = 100 fibre years/ml

at a concentration of 10 f/ml a man has to work for 10 years

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In fact it is rather unusual nowadays for an employee's cumulative exposure to exceed 25 years, because of the changing pattern of work, so that the 2 f/ml standard has for the vast majority of workers a large built-in margin of safety.

There were many other points which the programme did not bring out. For example, of the 290 men in the cohort only 52 had had cumulative exposures of less than 100 fibre years/ml, and some of the longer servi men had had cumulative exposures of nearly 500 fibre years/ml. It would not be unexpected for some of the men in the exposure categories which far exceeded what ultimately was accepted as the "standard", to develop asbestosis and its associated diseases. In those categories where the cumulative exposure has remained up to the standard, the health record remains good. Until 1968 when the BOHS Standard was published there was no recognised biological standard for asbestos. To criticise such a recently introduced attempt to improve working conditions throughout al of British industry is not possible because of the obvious lack of data which can be collected to verify or refute it since it came into genera use in 1970.

The 7 lung cancer deaths in the cohort do not indicate an excess of observed deaths compared to the number which would have been expected i a sample of the general population having the same number of men in it with the same age distribution. It was not stated on the programme that all 7 men were cigarette smokers, and cigarette smoking is known to increase the incidence of lung cancer in heavily exposed asbestos worke

Mortality studies published relating to TBA indicate that as dust contr has improved since 1933 (when the Asbestos Industry Regulations, 1931, took effect), the incidence of asbestosis has rapidly declined and lung cancer now occurs at a rate no greater than is found in the general population. The risk of anyone working in T&N factories (where the BOHS Standard is adhered to) getting lung cancer, is probably no greater tha that for the general population.

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Three other points warrant comment. First, there is no danger whatever to the wives and families of T&N workers as a result of working to today's standards. The cases to which Dr Selikoff referred on televisio were in a factory where dust levels were probably in hundreds of fibres not in the single figures to which we have been operating. So the dust on their clothing would have exposed relatives, when they got home, to

the first place, and are not allowed to take contaminated overalls home - they have to be laundered under company arrangements.

The second point is that viewers may have formed the impression that 50% of the asbestos workers in the 290 cohort showed x-ray changes which, according to Dr Lewinsohn of TBA, connote asbestosis. ~~The actual incidence of changes consistent with it was 17%.~~ Dr Lewinsohn is at pains to point out that not all the changes which he has seen are those of asbestosis and that he has classified a wide range of changes of similar appearance under a broad descriptive heading. Many of the chang are only of slight degree and may have nothing to do with the effects o asbestos exposure. Dr Lewinsohn has always maintained that as no attemp has been made to relate these changes to cumulative dust exposure histories or to the clinical features of the population concerned, no conclusions can be drawn with regard to the BOHS Standard and these x-ray findings. It is unfortunate that Dr Selikoff has steadfastly refused to accept this explanation.

The diagram in the TV film which showed millions of fibres being breathed in during a normal 8 hour day did not make the point that most of what is breathed in is also breathed out.

Finally, the very dusty conditions shown at the beginning of the programme were not filmed at TBA at all. They were simulated conditions, using bags of flour mixed with cement dust, and bear no relation whatever to dust levels in the Rochdale factory.

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