

(Doll and Peto page 1.) The HSE figures have not been published and Sir Richard gave no scientific reason at his Press Conference for selecting from these figures a figure of 0.0005f/ml as the number of asbestos fibres measured in asbestos containing buildings and using it for his calculations.

To arrive at this figure, more juggling with figures is necessary. The Canadian study used Transmission Electron Microscopy but counted only fibres longer than 5 microns. At the Rochdale factory, only fibres longer than 5 microns, seen by optical microscopy, are counted. To adjust for the difference between the two methods of counting Sir Richard halves the Canadian figure and then, although he writes (Doll and Peto page 33) of major defects 'in any extrapolation of dose-specific risks from one industry to another or from occupational to environmental exposure', he uses his Rochdale data to evaluate the environmental risk for those exposed to 0.0005f/ml for 40 hours a week for 20 years.

He assumes that exposure is for only 40 hours a week for 20 years in a building where the asbestos level is only 0.0005f/ml; exposure during the other 128 hours each week, whether at work, at home, or in other buildings, or while travelling, is ignored. Also, the level of asbestos in any building is unlikely to remain at 0.0005f/ml for 20 years. 0.0005f/ml of chrysotile were measured in buildings in which asbestos was in good condition.

Only rarely is chrysotile the only asbestos found in buildings in the UK. Sir Richard accepts that 'exposure to crocidolite (and possibly also to amosite) must be expected to produce effects that are appreciably greater' (Doll and Peto page 48) and told his Press Conference that damaged asbestos in a building would mean asbestos fibre measurements in excess of 0.0005f/ml. Fibre counts increase when asbestos deteriorates with age, is damaged, or is removed for maintenance, so that, even if 20% of the population is exposed to only 0.0005f/ml of chrysotile at present, there can be no guarantee that their exposure will remain so low for 20 years - yet Sir Richard assumes this when making his estimate of only 1 death a year in the UK.

Sir Richard also admits that he can only use 'hypothetical' figures because there is no national data on the number of people who 'live or work in contaminated buildings and the average asbestos levels that they are exposed to...' (Doll and Peto page 47)

He 'supposes' that 20% of the population suffer an exposure causing an average risk of 1 in 100,000 and concludes 'Such exposure would cause approximately one death per year in the whole country.' (Doll and Peto page 48.)

He admits that extrapolation must be 'over several more orders of magnitude' (Doll and Peto page 47), than is necessary when calculating the effects of risk at work; that there are many 'biological uncertainties' involved in this procedure, which 'depends on measures of exposure that are still less reliable.' (Doll and Peto page 47.)

Would an Actuary, given such data, have produced such a low estimate of risk?

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