stopped using the suspected chemical when evidence began to emerge in 1949.

Thirty years on, the preventive measures taken in the rubber industry can be assessed, and the epidemiological pitfalls can be seen in perspective. A mortality study of the rubber and cable-making industries was set up in 1965 by the then Senior Medical Inspector of Factories to compare mortality patterns in three groups of men over 35 years. The first group had worked for more than one year in factories which had used the known bladder carcinogens and had started work there before 1 January 1950. The second group had worked for more than one year in the same factories and had started work there after precautions had been started—after 31 December 1949. A third group worked in factories which had never used the known bladder carcinogens.

So far three reports of these studies have appeared.[5–7] The first,[5] which covered the initial five years (1967-71), was reassuring: it found no evidence of a continued excessive risk of bladder cancer in men starting work after 1949, though, as expected, those who had been at work before that year had a frequency of the condition that was higher than normal. More deaths from lung cancer than expected (standardised mortality ratio=118) were recorded, however, and this excess was particularly noticeable in two sectors of the industry, one of which was tyre manufacture.

The second report[6] covered deaths between 1972 and 1974 and included the surprising and disturbing finding of a "significant excess of deaths due to cancer of the bladder throughout the industry including men who had not been exposed to acknowledged bladder carcinogens." The excess of deaths from lung cancer in the tyre sector found in the first report was confirmed.

The latest report[7] covers the whole period of the follow-up (1967-76) and is again reassuring but shows that some of the conclusions reached earlier were mistaken. The unexpected finding in the second report of excess of bladder cancer deaths among men not exposed to acknowledged bladder carcinogens seems to have been misleading: that excess has not been confirmed. And the report adds, "an excess of bladder cancer deaths reported in the footwear and footwear supplies (except adhesives) sector disappeared when two factories which had been misclassified in this sector, were reclassified."

Deaths from lung cancer are reported as high in the whole rubber industry and particularly in certain sectors (of which tyre manufacture, previously suspected, is not one). Nevertheless, the tyre sector does not escape for it is now reported to have an excess mortality from stomach cancer. There is some, but by no means complete, support for the findings of an excess of cancer of the lung and stomach in the rubber industry from other studies in this country[8] and abroad.[9 10]

How great is this increased mortality from lung cancer and how does it compare with the risks in other occupations? Though the rubber and cable-making industry as a whole has a standardised mortality ratio (SMR) for lung cancer of only 108, three sectors in it have SMRs of 176, 139, and 186. These increases need, however, to be compared with other SMRs for lung cancer, such as 138 for gas workers,[11] 364 for chromate workers,[12] 1000 for asbestos-textile workers employed for more than 10 years before 1933 (when asbestos regulations became effective[13]), and 161 for asbestos workers employed after 1933.[14]

This sequence of changing results is a cautionary tale which shows that epidemiologists are sometimes right to be very guarded when discussing their findings and that irresponsible commentators can do great harm with statements based on early, preliminary findings. The corollary, surely, is that if such findings are to be used as a basis for administrative action the strengths and weaknesses of the evidence must be made clear. Working conditions need to be improved in the industry, and efforts are now being made to achieve this. But at a time when pressure groups make the maximum possible capital out of any associations between industrial processes and disease, occupational physicians will need to be cautious in interpreting epidemiological evidence. At a time of financial stringency money should be spent on preventive measures only when the evidence is sound, and not simply because doubts have been raised.

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Correction

Bereavement counselling: does it work?

We much regret that in the Regular Review on "Bereavement counselling: does it work?" by Colin Murray Parkes (5 July, p 3) the Foundation for the Study of Infant Deaths was wrongly referred to as the Association for the Study of Early Infant Deaths.