

was not related to the appearance of bronchitic symptoms. Prospective studies however, to confirm the situation regarding these lung-function studies.

#### *Action of TDI*

A problem in any study of the effects of human exposure to TDI is the separation of its potentially sensitizing properties. Some indication of an immune response has been obtained in animals (*Cited in F.C.T.* 1965, 3, 645) but attempts to elicit such a response in apparently sensitized workers have failed, although complement fixation with human serum albumin stimulated the lymphocytes in these sensitized workers (*ibid* 1970, 8, 235). Further attempts to demonstrate circulating antibodies in workers have been made in 55 workers all with symptoms suggesting TDI sensitivity (*R. Soc. Med.* 1970, 63, 379). In this study, a complement fixation method, a double antigen technique and a modified passive cutaneous anaphylaxis test were used. Although 23 of the patients reacted positively in at least one test, the results between the tests was poor, indicating that they detected antibodies of different specificity or of different immunoglobulin class. Until suitable diagnostic tests for TDI sensitization are devised, the aetiological relationship between antibody and symptoms of clinical sensitization will remain obscure. Experimental studies in monkeys and guinea-pigs failed to show whether the effects of TDI in man are likely to involve an immune mechanism (Stevens & Palmer, 1968, 380). Although exposure of the respiratory system to TDI rendered it more susceptible to subsequent exposure to low levels of the compound, the inadequacy of current diagnostic techniques prevented the drawing of any conclusion as to whether this effect involved an allergic mechanism.

Further information is clearly needed on the chronic and immunological responses of man to TDI, possibly also to other diisocyanates. Doubts must remain about the adequacy of the data collected in 1961 in the USA from 0.1 ppm to the current value of 0.02 ppm. Further research and other studies will be assisted by a more reliable technique for the measurement of TDI in the atmosphere, and here the developments described by Parkes (*ibid* 1970, 8, 207) are of interest.

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#### ASBESTOS: QUESTIONS STILL UNANSWERED

Exposure to asbestos may lead to the formation of asbestos bodies in the lung and the development of asbestosis and tumours (mesotheliomas) of the pleura and lung (*ibid* 1970, 8, 207). The aetiological relationships between asbestos exposure and lung tumours are poorly understood and the presence of asbestos in the lungs of the general population complicates the issue still further. Moreover, epidemiological studies are still in their infancy and the importance of the nature, severity and duration of asbestos exposure in tumour development needs to be more clearly defined. The health hazard introduced by the working environment introduced relatively recently should be reduced significantly, although the full benefits to be gained may be realized only by the experience of past exposure.