The findings from these studies are presented in a comprehensive series of tables. Most of these are in Volume II; Volume I consists of text and main summary tables only. The main findings follow the familiar pattern found in other such studies; smokers have higher symptom prevalence than non-smokers; urban dwellers have respiratory symptoms and lower ventilatory function than their rural and country town compatriots. The author compares his findings with those from British field studies and shows that these Dutch populations have a consistently lower symptom prevalence even when differences in cigarette smoking are taken into account. The tests for allergy, blood eosinophilia, and the inocutaneous skin tests showed no excess among subjects with chronic bronchitis. On the other hand, positive reactors to the histamine threshold test were more often found among the chronic bronchitics. These findings are as yet unexplained and are included, among other items in the summary, as requiring further investigation.

This is not an easy work to read. However, it is a useful contribution to chronic respiratory disease epidemiology and can be recommended as essential reading for anyone starting work in this field.

J. R. T. COLLEY


This booklet describes the international philosophy of permissible limits, and it points out that the limit set depends upon the biological response. It mentions the difficulty of assessing long-term effects, particularly when these are genetic or carcinogenic, and it stresses the limitations of laying down a limit when a few members of a working population display hypersensitivity. When reading this, our experience in this country with isocyanates comes to mind. ‘Most’ of the committee members favour a four-tier classification of the biological effects of occupational exposure, but it must be remembered that these effects will, in fact, form a spectrum. There is a paragraph on the problems of ‘developing countries’ which, it is said, need urgent study. But should these countries, one wonders, have limits any different from any other country? The speediest way of producing a safe working environment is probably to have a strict set of factory laws, strictly enforced with a dash of ‘prep school’ discipline – or is this an unacceptable old-fashioned approach? The differences in limits set by the western and eastern blocs are mentioned. These really reflect the problem of relating function to structure, or the behaviourist, as seen in Pavlov, to the morbid histologist, as seen in Virchow. The behavioural approach east of the Elbe in theory leads to lower limits which, in practice, cannot be worked to, and the final result is often less hygienic than would be the case in a western country. But this is also the result of an important difference in thinking between east and west. Eastern man tends to be more interested in the theoretical plan, but western (and particularly English) man on the final result which he often reaches in a theoretically untidy way.

Some of the suggested limits differ by as much as a factor of 20, and the committee makes the very reasonable suggestion that a list of substances for high priority study should be compiled. It also suggests that international reference centres should be set up where methodology can be developed and standardized. Acute toxicity testing with two separate species of animals is put forward, but might it not also be worth considering whether, in addition, a pregnant group should not be included? We do not want the lesson of thalidomide to be wasted. But here the theoretician will doubtless object that thalidomide is the business of the department of pharmacology rather than that of occupational hygiene. If so, this pragmatic reviewer must ask, in reply, whether the biological organism can detect the finely drawn divisions of administrative structure.

As a discussion of many of the problems of permissible levels this pamphlet is well worth a place in the library.

R. C. BROWNE


Noise and Man is by far the best of a number of books published recently on noise and its effects on people. Just less than half the text is devoted to hearing, its measurement, deafness, and the effects of noise on hearing. The remainder covers the other effects of noise on people, acoustical physics, aircraft noise, and impulse noise. The book is well written and there is a lot of information in it but I am not quite sure whether it is aimed at the proper readership. According to the introduction it is intended for a wide range of specialists, not expert in acoustics, who may find themselves confronted by noise problems. Medical officers in local government and industry are specifically mentioned, and, as a reviewer, I looked at the book from their point of view.

Medical officers of health are likely to be interested in Professor Burns’ advice on how to decide whether a particular noise is a nuisance for the purposes of the Noise Abatement Act. Unhappily, the Act receives no mention, and the discussion of annoyance from noise would not help very much with any practical problems on nuisance as a statutory matter which might be facing them.

An industrial medical officer might be seeking information on the prevention of occupational deafness. Professor Burns, following American thought, includes routine audiometry among his recommendations. Few authorities give really convincing reasons why this procedure should be adopted as a matter of course. Professor Burns advises us to do it, despite its pitfalls and obscurities, because of the variation in susceptibility between individuals. Elsewhere in the text he makes the point that if hearing protection is adequate audiometry would serve only to identify the individuals who are not wearing their hearing protection. On preservation of hearing he writes ‘...each person’s hearing must be measured before employment and at intervals throughout the period of employment if a hazard is judged to exist’. Much depends on what is meant by that last phrase; if a hazard can be removed by providing ear defenders then it is clear that audiometry is seen as an alternative to
Permissible Levels of Occupational Exposure to Airborne Toxic Substances

R. C. Browne

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