

sustained and large sums of money have been spent. Not all dusty industries, however, have taken sufficiently drastic steps to provide safer working conditions and, as this report shows, more effort is still required to prevent pneumoconiosis.

R. I. MCCALLUM

Methodology in Human Fatigue Assessment. Edited by K. Hashimoto, K. Kogi, and E. Grandjean. (Pp. xxx + 200; 39 tables; 71 figures; £3.50). London: Taylor and Francis. 1971.

If I remember my medical history rightly, in the first world war the Medical Research Committee (as it was then called) possessed an Industrial Fatigue Research Board, but by the time of the second world war this title had changed to Industrial *Health* Research Board. This represented a significant change in thinking about 'fatigue' still not completely transmitted to those who work and talk about it. Fatigue is an opaque idea but still good for a symposium about every 15 years—and this publication represents the most recent of these. Medical men, physiologists, and psychologists cover the field well. There is a lot of talking about fatigue, some of it not very clear; for example, there is a paper which discusses the 'relations between the symptoms and the feelings of fatigue' and another which sets up a mathematical model of the phenomenon based upon a questionable analogy, but which can, of course, be studied by computer.

However, this is the last word on the subject and, as such, is worth a place on the shelves of those whose speciality it is.

R. C. BROWNE

Précis de Toxicologie Industrielle et des Intoxications Professionnelles. By R. Lauwerys with the collaboration of F. Lavenne. (Pp. 553; 900 FB). Gembloux: Duculot. 1972.

A note on the dust cover of this book says that its accent is on recent work in the toxicology of industrial chemicals and that it is essential for those engaged in industrial medicine and hygiene, and for the French-speaking members of this group this is probably correct. The book is used as a textbook for the theoretical part of the author's course in industrial medicine at the Catholic University of Louvain.

The text is divided into two sections. The first part (77 pages) deals with general aspects of toxicology, routes of entry of poisons, evaluation of toxicity, mechanisms of action, etc. while the second part (476 pages) relates the toxicology of specific chemicals in a way familiar to us from the works of the late Ethel Browning.

For the experienced practitioner in industrial toxicology the first part of the book contains nothing new, although he may like to refresh his memory in the chapter on the biochemical mechanisms of action. However, for the student and perhaps particularly for the non-medical hygienist or engineer, this first part, in its lecture note form, provides a clear, concise account of the essentials with some useful statements such as those on the difference between toxicity and hazard. The author's biochemical interests are apparent throughout this section.

The second part of the book deals with a very wide range of chemicals—metals, hydrocarbons (including halogenated), gases, vapours, dusts, chemicals used in the plastics industry, pesticides, rodenticides, herbicides, fungicides, and many others. In most cases the information given is short but useful. A major feature of the book is the very full lists of references to both European and American literature which have been collected from a wider selection of journals than usual in a work of this type. The author is also suitably cautious about the claims which have been made for the carcinogenicity of some of the chemicals discussed. Where possible, notes on the relevant Belgian legislation have been included.

Although the Threshold Limit Value is given for each compound where it has been decided, there are practically no LD₅₀ data in the book. This exclusion is so complete as to be deliberate. The author has obviously gone to considerable trouble to provide fatal doses for man whenever possible. Although one does not wish to over-emphasize the importance of LD₅₀ data and although one realizes that the book is mainly concerned with effects on man, nevertheless the addition of some LD₅₀ values would increase the book's general usefulness, particularly since these values are often required for classification for labelling. This defect could be corrected for the second edition.

When the author comes to revise his book he will have to do something about the last seven chapters which occupy 65 pages. One can see how these chapters fit into a lecture course, but they should be either expanded or left out of the book. Just to provide a list of solvents, as in chapter XX, is not very useful. The chapter (XXIII) on industrial cancers is particularly bad, and it is not possible to deal with the mechanisms of carcinogenesis in two pages, even in a précis. Despite these shortcomings, the author is to be congratulated on producing a very useful book for his students.

H. B. STONER

National Coal Board Medical Service and Medical Research Annual Report 1970-71. (Pp. 40; 17 Tables; 5 figures; £1.00). London: National Coal Board. 1972.

This is a discreetly glossy report in Oxford/Cambridge blue and black. There is a section on medical examinations, and a long and interesting one on the protection from health hazards, of which by far the most important is dust. This is followed by a consideration of injuries and their treatment, and of the first-aid organization. The report includes a list of the staff, publications, and research advisory panels which have the task of advising the chief medical officer. The document makes interesting reading for any medical man who works in a coalmining area; for example, each area doctor does about 1 600 examinations per year. Ninety per cent of juveniles are fit for any job in coalmining, as are 82% of 'adults', so that the cost of detecting a single unfit juvenile is pretty high. The fact that the men and their Trades Union hold the Medical Service in high esteem is illustrated by the statement that they seek as many as 22 000 consultations per year.

Dust is the most important medical environmental

hazard in coalmining, and the National Coal Board has recently set new standards and has changed over from a particle count to a gravimetric system of measurement. Only 45% of drivages in stone are satisfactory from a dust point of view, so that the 'hard headed man' of the clinical textbooks is still the most likely type of miner to contract a dust disease. Pneumoconiosis is not decreasing in east Wales and is decreasing in west Wales only marginally, but elsewhere in the coalfields there has been a systematic decline in prevalence by age over the last 10 years.

The broadmindedness of the Coal Board's Medical Service is shown by its interest in such things as the ergonomics of lifting, of which there are some illustrations. The men in the pictures are shown lifting heavy weights with their legs well apart. On the other hand, my father taught me (among other things) to lift with my legs together, because this kept the hernial orifices closed. I wonder which is right?

The problem of noise has been tackled in a courageous fashion and the Coal Board has not been afraid to do audiograms on employees who were likely to demonstrate permanent threshold shift.

During the year covered by the report, the staff of the Medical Service produced two dozen publications.

This report is well worth study, particularly by the medical staff of large labour intensive industries or those with difficult environmental problems.

R. C. BROWNE

Hormones and Resistance. By H. Selye. 2 Volumes. (Pp. 1140; 37 figs; DM.268). Berlin: Springer-Verlag, 1971.

This book is clearly the product of years of personal research and carefully recorded reading of the literature. It is a tribute to the industry and application of its author, for his thorough approach is explicit in the text. Whether he succeeds in his intention, however, will depend very much on the personal preferences or prejudices of the reader.

The intending reader must consult the remarks in the preface to the first volume, in which Professor Selye sets out his philosophy for the design of the book. He points out that an author must first collect the facts of his subject by an analysis of the literature, and then in the light of his own personal experience he evaluates the material gathered to synthesize the whole. In so doing, to maintain continuity, he often deprives the reader of significant detail, such as criteria applied to an experimental situation, or the nature of controls. Professor Selye points out that his own 'analytico-synthetic' style

attempts to overcome this, providing the reader with more useful information without using unnecessary padding of transitional sentences and circumlocution.

In this aim he certainly succeeds, for the book is constructed on the basis of chapters introduced by a short review of the subject matter, followed by summaries of relevant references. In consequence, the book becomes an excellent source of reference material, and as a guide to further reading will be much consulted by physiologists, pharmacologists, and toxicologists. However, the reader new to the subject will find the book rather heavy reading, and will miss the smooth flowing review to introduce him to the field. He will also need both volumes so that he may freely consult the Glossary of the 'Symbolic Shorthand System (SSS) for Physiology and Medicine', plus the section of Bibliography to provide details of the sources of the references. The fragmentary type of approach will not commend itself to those who enjoy reading medical texts in well-formed and flowing prose. The author allows himself to expand only in Chapter II 'History' and Chapter X 'Theories'.

Overall this book is a superb review of reference material which will be much consulted but will not be read in full from cover to cover; its enormous cost will restrict it to the wealthier libraries only.

D. DAVIES

NOTICE

ILO-U/C International Classification of Radiographs of Pneumoconioses, 1971

This is the latest issue of the well-known International Classification published by the International Labour Office for the first time in 1958.

The present Classification, which was finalized in collaboration with the UICC/Cincinnati Group, classifies in detail any type of pneumoconiosis, including those characterised by small irregular opacities, and makes it possible to follow the evolution of the radiological picture.

The set of standard films illustrating the ILO-U/C Classification, 1971, is composed of 21 radiographs, standard size. They provide examples of the various types of small opacities, rounded and irregular, and of the various categories of profusion. An explanatory paper on the use of the classification is enclosed with each set. Price: Sw. frs 250 (including mailing and insurance charges).

Orders, to be paid in advance, should be addressed to: International Labour Office, Occupational Safety and Health Branch, CH 1211 Geneva 22, Switzerland.