

and prevention. In the conclusion the author tries to bring these together by commenting on different methods by which these problems are considered in the United States, Canada, and the United Kingdom.

For the United Kingdom reader there are problems in the second half. Although Bates worked for a considerable time in the United Kingdom at St Bartholomew's Hospital, he left more than 30 years ago. Thus his views of the process of decision making in this country are dated. For all readers the strength of the book is in his description of the importance of different phrases to describe studies, the different approaches to their interpretation by a variety of audiences, and his perception of the way in which the legislators and others react to epidemiological findings. His plea and emphasis to strengthen epidemiology is particularly welcome.

The book however, does have serious weaknesses. Firstly the analysis of the policy issues and the influence of a variety of "actors" in influencing policy formulation. For example, in the field of air pollution he neglects history—for example, the National Clean Air Society, which had been active for at least 100 years, and the work done by the MRC Air Pollution Research Unit at St Bartholomew's Hospital, created before 1952. He muddles air pollution due to coal and its derivatives with that due to traffic. He neglects the importance of domestic pollution in the United Kingdom in contrast with other countries, and seems unaware of the intense involvement of the courts and lawyers in the United States in discussions on the work of the Environmental Protection Agency in the 1970s. His comments on cigarette smoking are similarly flawed. Although the Surgeon General's Report was crucial in the United States, the same cannot be said for the United Kingdom. The discussion of cigarette smoking is much shorter—and does not touch on most of the policy issues in this field. The discussion on the hazards of lead in petrol, however, epitomises a basic problem in this work. Bates does not seem to accept that there are good and bad studies. Even though bad studies may all show the same effect, that may be because the same error has been made in all of them. Part of the problem in the use of epidemiology for the determination of environmental or other risks is the need for care in design, execution, and analysis. Not all studies are equal. He is critical of the British interpretation of studies on the effect of lead in petrol. That was certainly due to the careful evaluation of those studies that had been published. These comments can be applied to all examples. Thus my recommendation is that this work should be read by those scientists involved in translating environmental risks to lay audiences. Epidemiologists and others should, however, beware of accepting the analysis and findings for the individual risk factors or policy issues.

WALTER W HOLLAND

Gardner's Chemical Synonyms and Trade Names. Edited by M ASH, J ASH (Pp 1312; price £125). 1994. Aldershot, Hampshire: Gower. ISBN 0 566 07491 5.

This is a unique encyclopaedia of information on chemicals and chemical products. More than 40 000 trade names and chemicals are included: some 18 000 having been added since the last edition. The range of coverage is vast: acorn sugar to zootic acid.

If you knew zootic acid was a synonym for hydrocyanic acid you should be congratulated, but do you also know what sextone, Pearlstick, Bronco, Golden Bear, and oxygen cubes are? "Gardner" will tell you.

Who should have a copy of this book? Occupational physicians faced with new products, clinical toxicologists dealing with poisoning by commercial products and those interested in general toxicology should all have ready access to copies. Much of the information cannot be easily found elsewhere and as a first source when dealing with difficult enquiries this book is invaluable. If you need yet more information: an excellent set of addresses of producers of chemicals is included.

R L MAYNARD

A Practical Guide to the Determination of Human Exposure to Radiofrequency Fields. NCRP REPORT NO 119. (Pp 227; price \$US25). Bethesda, MD: NCRP. ISBN 0-929600-35-5.

This 200 page paperback practical guide is the third in a series of NCRP reports on radiofrequency radiation and is effectively a companion volume to the other two that describe quantities, units, and biological effects. Together they encompass a wealth of information on this much discussed subject that is primarily the concern of occupational health and safety specialists. Interest in the subject has increased recently largely because the media and public have latched on to the notion that electromagnetic fields at the intensities experienced in the home, where close to overhead power lines, might constitute a health hazard. This hypothesis is being explored and, although it is far from being internationally agreed, it has intensified the debate and stimulated scientific interest in the subject to the extent that serious attempts are now being made to measure low intensity electric and magnetic fields in a methodical and reproducible way.

The NCRP guide was prepared by a committee of academic and industrial experts. Being the product of a committee the guide draws on the members' wide experience and includes a broad range of examples of practical situations. Much of the text is in the form of appendices that describe practical aspects of measuring fields associated with specific applications as diverse as electrocautery equipment or marine radar. The 23 sections in appendix A are set out very clearly in a uniform way for easy reference.

The NCRP does not claim to be international and readers outside the United States may be put off by constant reference to national organisations, government departments, committees, and regulations, which may be unfamiliar in other countries. Nevertheless, the basic science and the practical methodology applies universally. The terms are clearly explained in a glossary and the collaborating organisations are listed in the addendum with great consideration for the reader, although the meaning of some of the acronyms can be found only by searching the text.

Appendix B very usefully gives four detailed examples of exposure determination and discusses at some length a range of difficulties that might be encountered when measuring fields and when writing a report. Besides the appendices the text is in five sections including an introduction. These sections include basic concepts, approaches for analysing measurement data, instrumentation and techniques, and a brief section

on recommendations for further research. Six recommendations are boldly stated in a style that seems to reflect the heartfelt needs of frustrated practitioners.

All in all this well presented book is more than just a guide: it is a miniature textbook, guide, and handbook.

G HOOKER

Work Related Musculoskeletal Disorders (WMSDs). Edited by I KUORINKA, L FORCIER (Pp 421; price £19.95). London: Taylor and Francis ISBN 0-7484-0132-6.

Work related musculoskeletal disorders (WMSDs) are a significant problem throughout the world and within the United Kingdom they represent a major challenge to all those professions concerned with occupational health and safety (Hodgson *et al*¹). Although WMSDs are diseases like any other, with their own epidemiology, they are also the focus of special legislation and compensation, due to their relation to work. This has had a profound influence on the way they are understood and this book is an excellent attempt to examine and critically interpret the scientific evidence on the association between work and WMSDs of the neck and limbs. As such it is the first authoritative source that brings together many internationally renowned researchers from many disciplines and organisations.

The initial chapters set the scene in terms of a conceptual framework including, What are WMSDs; their natural history; prevention etc? This is followed by a quite excellent chapter on the epidemiological evidence of selected musculoskeletal disorders. Sections on tendon, nerve, muscle, joint, vascular, and non-specific or multiple tissue disorders are presented. The accompanying tables for each selected disorder are provided with clear descriptions of each study—for example, outcome and exposure measures, study design, findings (odds ratios)—together with critical comments. This is followed in chapter 4 by the identification, measurement, and evaluation of risk factors for WMSD and covers physical demands to cognitive demands and organisational and psychosocial work factors.

The book provides an excellent inventory of measurement tools for evaluating risk. Similarly the importance of health and risk factor surveillance is also emphasised. Additionally analysis and interpretation of data is well presented. The foregoing material is clearly a prerequisite to any attempts at managing solutions (chapter 6). This preventive approach is within an ergonomics framework that emphasises the need to consider the interrelation between various aspects of the work system—that is, organisational structure, people, technology, work tasks, environment.

Managing change, WMSD related training (as an adjunct to the ergonomic approach), and medical management, provide further value in the concluding chapters of this invaluable book. Such an authoritative source should be required reading for occupational medicine and nursing professions and all other professionals in the allied health and safety fields (physiotherapists, ergonomists), also those within the legal professions including some High Court Judges might find this excellent text instructive.

DA STUBBS

¹ Hodgson JT, Jones JR, Elliott RC, Osman J. Self-reported work-related illness. London: HSE Books, HMSO, 1993.