BOOK REVIEWS

Book review editor: R L Maynard

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This indigestible book is packed with scientific papers covering topics as diverse as physiology, experimental psychology, ergonomics, and social psychology. The main theme is that of aging. This is the proceedings of the 1993 European Symposium on Work and Aging, with a few additional contributions.

The commentaries interspersed with the papers provide interesting insight into the lunacy of international business practice that "lays off" by early retirement or redundancy, increasing numbers of mature workers who thereby displacing costs on to the State. This is in spite of steadily falling numbers of new entrants into work. The demographic changes say it all, as the average age of the European population continues to rise.

The papers taken individually are of interest, but the book as a whole is confusing to the reader, and it has clearly been difficult for the editors to maintain a coherent approach. There is little of immediate relevance to the occupational physician, although the paper on health effects of shift work on the older workers is of some interest. It is, however, well interspersed in the essay on motivational and cultural factors by M J Schabracq, who is an organisational psychologist.

This book has the stated intention of stimulating discussion within a wide audience, which includes occupational health practitioners. It fails in its purpose by being too diffuse, but is nevertheless relevant reading for those who formulate and maintain the personnel and political policies currently in place across Europe. It is of little comfort that the United Kingdom is not alone in its current pattern of pensioning off the older worker.

S B DIGGLE


This multidisciplinary, multiauthor book of approaching four hundred pages examines the nervous system as it is affected by exposure to toxins and ergonomic stressors at work. It considers epidemiology, exposure measurement, dysfunction evaluation, neuropsychiatric disorders, outcomes, rehabilitation, and medico-legal consequences. The "centre of gravity" is in the United States, with 13 of the 15 chapters having American authors.

The authors start from the disciplines of neurology and neurotoxicology, and focus onto the "rapidly developing specialty of occupational neurology". Thus they bring together into one book chemicals and physical stressors affecting the nervous system. The occupational physician from the United Kingdom, used to chemical toxicology and ergonomics as separate subjects may find this book overwhelming.

The book can be divided structurally into two main sections. The first (chapters 1 to 9) looks at the effects of chemicals; the second (chapter 10) is a physical force on the nervous system. There is an interspersed third small section (chapter 10) on medico-legal issues.

As should be expected, this essentially American book uses United States references, occupational health standards, and examples. OSHA, NIOSH, ACGIH, and TLVs are used throughout with a brief mention of German MAK values.

The first part of the book deals with epidemiology in the neurological context (chapter 1) with a description of the basic elements needed to relate exposure to nervous tissue injury. Methods are then developed to determine prevalence, incidence, and statistics. The difficulties in diagnosis of, for instance, a diffuse chemically induced encephalopathy are not shirked, and various methods of avoiding pitfalls are illustrated. Retrospective and prospective case-control studies are encompassed so that the reader may acquire a firm understanding of modern epidemiological practice.

Assessment of exposure (chapter 2) and the continuum from exposure to disease, provide an overview of occupational hygiene practice. Next comes biological monitoring and clinical disease (chapter 3) covering solvents, hydrocarbons, pesticides, and gases, with useful summaries of named chemicals and their biological indicators.

Neurological examination (chapter 4) evaluates ways of determining mental status as well as quantitative methods of neurological testing, with brief descriptions of the various ancillary tests in current use. Neuropsychological tests used in assessment of neurotoxicity are described in chapter 5, and the neuropsychiatric consequences of exposure to neurotoxins (chapter 6). The overview of psychosis, dementia, depression, anxiety, and post-traumatic stress disorder in relation to occupation provides a useful synopsi for the occupational doctor.

The visual system (chapter 7) is well covered, with a list of neurotoxins and their specific effects. Brain tumours associated with occupational chemical exposure (chapter 8), and a literature review of substances with an excess risk are tabulated and summarised. Chapter 9 provides an alphabetical list of neurotoxic compounds, human exposure, and clinical manifestations.

Chapter 11 by Buckle from the Robens Institute in the United Kingdom begins the second main section (chapters 11–15). The mechanical effects on the extremities, nerve entrapment, spinal biomechanics, and industrial low back pain are examined, followed by occupational rehabilitation. These chapters are well illustrated, with mechanical and mechanical formulae aimed essentially at prevention and advice for the occupational physician.

Chapter 10, "Interaction of Medical and Legal Systems" is entirely American focused, and examples of United States law are quoted from courts in various states. A number of general principles apply universally, but American details have limited value to the United Kingdom.

Inevitably with many writers, style varies, but the editor has done well in pulling it all together. The various authors themselves have taken care to make what could be turned into a tedious read into a coherent and comprehensible text, with the insertion of practical examples which liven the text, and focus the mind on the typical everyday problems the reader will face.

In future editions, as research progresses, and the evaluation and understanding of psychiatric disorders relating to toxins and occupation expands, then the section on ergonomics and mechanical effects could well be hived off to another volume.

For the occupational physician, particularly working in the chemical industry, this will be a useful new publication that should enhance knowledge, and act as a guide in tackling problems arising from actual and potential workplace exposure. The section on physical agents will have an additional interest, and the book as a whole could be helpful for candidates for the Associate of the Faculty of Occupational Medicine.

COLIN JUNIPER


This is a fascinating short volume on how to present data to policy makers. The author is a distinguished public health specialist and former Dean of a Medical School. In his later years he became interested in epidemiology and its use in the investigation of health effects of air pollution. Public health deals with major topics, air pollution, cigarette smoking, asbestos, lead, and electromagnetic fields and their association with health effects. In the first part of his book selected studies are chosen that have been used to show the possible risks. The second part deals with some of the policy issues in relation to these risks. The third part provides cautionary tales of the way in which the public, media, courts, and governments have been asked to appraise the problems of risk assessment
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 are dated. Particularly readers who read 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 approaches to our 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 the need for legislation. 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 to the United States, and is 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. The neglect 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 with this book: the book does not attempt 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 book should be read by those scientists involved in translating environmental risks to lay audiences. Epidemiologists and others should, however, beware of the need to interpret findings for the individual risk factors or policy issues.  

WALTER W HOLLAND


This is a unique encyclopaedia of information on chemicals and chemical products. Many chemical 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 that what seems to be novel in Pearlstick, Bronco, Golden Bear, and oxygen cubes are "Gardner" will tell you.

Who should have a copy of this book? Occupational chemists, a facet of 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 material has already been 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


This 200 page practical guide is the third in a series of NCRP reports on radiofrequency radiation and is effectively a companion volume to the 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 professionals. 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 proximity to these 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 generated 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 guidelines are 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. The detail in the text is in the form of appendices that describe practical aspects of measuring fields associated with specific applications as diverse as electro-  

DA STUBBS


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). Although WMSDs are diseases like measles, 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 (ergonomics). The international recognition of ergonomic causes 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 foregrounding 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 adjacent 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.