

BOOK REVIEW

Health risks from hazardous substances at work. Assessment, evaluation and control. By S A ROACH. (Pp 513; price £83.) 1992. London: Pergamon Press. ISBN 0-08-040837-0.

It is a pity that the term "occupational hygiene" is still in use. There must be better ways of describing the work of these occupational health professionals. I know that some medical students thought that it was to do with cleaning lavatories at work, even after a course on Occupational Health. In essence, the discipline is concerned with the assessment, evaluation, and control of health risks from hazardous substances at work. Indeed that is the title of a recent book by Stan Roach (sic).

Dr Roach has spent a professional lifetime divided between academic and industrial aspects of the subject. He has distilled his great expertise into a 500 page book, at last completed in his retirement, even though he had threatened such a work for some years. It is aimed primarily at the occupational hygienist and its focus is prevention rather than detection (or treatment) of occupational ill health. Furthermore the book faces limited competition in the bookshops. All three aspects favour good sales but the book has its drawbacks.

To begin with, single author books of this scope are a formidable task to complete. Nobody is an expert across all aspects of occupational hygiene and occupational medicine and it is in the latter aspect that Dr Roach is at his weakest. He is best on the pulmonary diseases but inconsistent in scope and depth in other areas. For example, he devotes half a page to the history of inorganic mercurialism but cites no specific agents in a dismissive section on reproductive hazards. An unfortunate lack of knowledge of current thinking on organic solvents is the one and only sentence on the subject; "organic solvents in paints and lacquers are associated with a characteristic neurotoxicity known as 'solvent syndrome' leading to chronic toxic encephalopathy." In his preface he admits to saying little on radioactive substances and "viable organisms" because he believes that it is "well

covered elsewhere". That may be true of the former but it is certainly not true of the latter.

Further strictures relate to the discursive style with little attempt to provide the passing reader with practical guidance in easily digestible form—no walk through survey guidelines, yet an excellent practical guide to risk management. The references are by and large relatively old—this is certainly true for the many text books cited that have passed through one or more editions than Dr Roach describes. For papers references are rarely later than 1987.

But the book has many good points. The long section (10% of the book) on wash out curves looks well written to an occupational physician and Dr Roach is especially strong when he sticks to his last in the sections on exposure limits, health risk surveillance, and control. The glossary is long and useful although a few definitions strictly outside occupational hygiene are simplistic or inaccurate.

Yet, overall, Dr Roach is to be congratulated on undertaking such a broad and daunting task with such success. The flaws are substantial but they do not damn the book by any means and certainly not for hygienists. But will they buy it? Some, of course will, but its price and the lack of practical guidelines replaced by discursive but good English may dissuade the ordinary practitioner who does not intend to read the book from cover to cover. Such people will expect their nearest occupational health library to buy it and they should.

J M HARRINGTON

Occupational Toxicology, 1st Edition. By NEILL H STACEY. (Pp 398; price £25). Rankine Road, Basingstoke, Hampshire RG24 8PR: Taylor and Francis Ltd. ISBN 0-85066-831-X.

This is a multiauthor, multidisciplinary text by authors of toxicology, occupational health, hygiene and safety, epidemiology, and industrial backgrounds, most of whom are based in Australia. The book is directed towards occupational health and safety practitioners at different levels and aims to provide an understanding of the basis of the science, a general overview of substance

classes and their effects on target tissues, how toxicology information is used in practice, and how the specialty interacts with other fields. The book is not intended as a toxicology reference source for the properties and effects of specific chemicals.

The possible drawbacks of a text book that is concise, directed at different practitioners, and written by authors not from the United Kingdom are much less than might be expected. Inevitably, the individual reader may think that there is an imbalance in level of detail in specific subject areas and lack of relevance in the chapter on *Chemicals, Workplaces and the Law* to the United Kingdom situation—but this should not detract from what is otherwise an informative and useful introductory text to occupational toxicology with up to date references. There is little that will be new to the experienced occupational physician (except, perhaps, the chapters on *Genetic toxicology and carcinogenesis*) but I commend it as introductory reading for pre-AFOM doctors (as an adjunct to other reading) and other health and safety practitioners whose work interfaces with toxicology. The way in which the principles of occupational hygiene and workplace control have been integrated with information on many of the principal hazardous agents in the workplace, including their mechanisms of toxicity, will be appreciated.

Points to quibble with are the dogmatic statement that "aromatic hydrocarbons can cause glomerulonephritis" (p301), the failure to differentiate between the benign "metal fume fever," extrinsic allergic alveolitis, and pneumonitis (p168, p258), and the lack of emphasis on such common occupational respiratory sensitizers as isocyanates, colophony, and epoxy resins and hardeners. The chapter on *Respiratory toxicology* lacks detail on recent developments in oxidative stress mechanisms, free radical formation, and the role of specific cell types and enzyme systems. The IARC classification categories are described only as a footnote in the chapter on pesticides (p182), but are referred to in the text on several occasions before and after this, and deserve greater prominence.

The book represents reasonable value at today's prices. I recommend it to the aspiring workplace investigator evaluating the human health effects of chemical exposures.

F M KENNEDY