coal gas are the main agents used in self poisoning, it is natural that a considerable portion of the book is devoted to these. The author favours a modification of the Scandinavian method for treating barbiturate poisoning and the results with this method of treatment (mortality less than 1%) are certainly impressive. Nevertheless forced diuresis with frusemide or mannitol, peritoneal dialysis or analeptics might be useful adjuncts to therapy in certain situations, and it is a pity that some indication when they might be of most use has not been more clearly defined. The authors appear to be against the estimation of plasma barbiturate levels on the grounds that, due to difference in tolerance in subjects, a wide range of values might be associated with a specific degree of unconsciousness. Changes in level might be of value in assessing progress, and further information on the correlation or lack of correlation of such levels with clinical symptoms and signs is still urgently needed. It has been suggested that marked pH-dependent excretion of drugs occurs only if the pKa of the drug is between 6.5 and 10.0. A short table giving the pKa range of common poisons would have been of value, especially if this was related to excretion of the drug in acid or alkaline urine.

Salicylates and iron tablets are probably the commonest drugs taken by children and it appears likely that contraceptive pills are the third. The latter group has merited only four lines.

In spite of these omissions I consider this small volume (size 5 × 7 in.), which can fit into a casualty officer's pocket, a most useful work.

H. SCHNIEDEN

The Effects of Abnormal Physical Conditions at Work. By C. N. Davies, P. R. Davis and F. H. Tyrer. (Pp. 185; 21s.) Edinburgh and London: Livingstone. 1967.

This booklet gives the full report of the proceedings of a meeting held jointly by the British Occupational Hygiene Society, the Ergonomics Research Society, and the Society of Occupational Medicine in January 1967.

It begins with papers by the president of each society (Drs. R. J. Sherwood, H. P. Ruffell-Smith, and J. A. Smiley) which set out the attitudes adopted by the practitioners of the three disciplines when faced by a problem of abnormal working conditions. All three papers are short, concise, and a delight to read.

The middle section consists of nine papers on the physiological effects of extremes of cold, heat, and pressure. They provide the reader with a feast of up-to-date physiology and reviews of current knowledge. The topics covered include cold exposure in man, hypothermia, ketogenic effects of cold, man's tolerance to extreme heat, hot environments and performance, military problems of air-transport and tropical service, physiological hazards of low pressure, decompression sickness in tunnel workers, and medical hazards of diving.

The final section, concerned with the industrial implications of abnormal physical conditions at work, describes the practical problems of heat in glass and steel works, protective clothing for cold conditions, and the problem of fatigue engendered by working in abnormal

conditions. This is in many ways the most interesting part of the booklet because it helps to build the much needed bridge between the research orientated physiologists and the practitioners who have to solve very complex everyday problems as they appear in industry.

One is particularly grateful to J. W. Hill, who describes the problems of hot work in the glass industry, for drawing attention to the practical difficulties of setting valid limiting criteria for extreme conditions and the need to consider each situation as a special case.

In view of the all-embracing title, it seems a pity that other abnormal working conditions were not considered—especially, perhaps, noise and air pollution in work spaces.

This little booklet is unpretentious in appearance, but the reviewer predicts it will find its way on to many bookshelves and will be consulted more frequently than many of the larger and more imposing tomes.

R. H. Fox

Potential Carcinogenic Hazards from Drugs. Edited by Rene Truhaut. UICC Monograph Series, Volume 7. (Pp. 249; 24 figs., \$17.00) Berlin, Heidelberg, New York: Springer-Verlag. 1967.

This book is a collection of papers delivered at a Symposium of the International Union Against Cancer held in Paris in November 1965, together with the discussion on some of them. The list of the participants shows that they were selected with an eye to gathering—and to limiting the number to—scientists distinguished in cancer research. The monograph may possibly be overlooked by industrial medical practitioners because the title does not suggest that there is anything of special interest in it to them. Although this is true of some of the material, many of the papers are worthy of their attention.

Berenblum's chapter on the principles of testing compounds for carcinogenicity sets out clearly the difficulties likely to be encountered as well as the benefits to be derived from work in the investigation of carcinogenicity. His paper will be of great help to the medical adviser in industry who is sometimes pressed to produce an impossibly quick answer to a question regarding the potential carcinogenicity of a particular compound. In one of the discussions, Roe points out that the tendency to regard carcinogenicity as an 'all or none' phenomenon has made the subject of chemical carcinogenicity unnecessarily difficult. This has resulted in the present situation, whereby any drug which has produced cancer in any species of animal under any set of experimental conditions and however administered, has come to be regarded as carcinogenic. Roe (1965) has already suggested a system of carcinogenicity rating which offers a prospect of rational appraisal of possible industrial carcinogens. Doll's contribution strengthens this view, and his plea that a balance be struck between harmful and beneficial effects will appeal to physicians, pharmacologists, and radiotherapists as reasonable and valid. He regards prospective studies and systems of record linkage as the most hopeful statistical approach.

Hueper's chapter on the hazards of cancer from arsenic and metal-containing drugs has some relevance

to the industrial situation, but the conclusion reached from the study of the effects of long-term oral or parenteral administration of drugs should not necessarily be accepted as applicable to manufacturers or users in industry where the main route of entry is by inhalation or skin absorption. Nevertheless, the methods of evaluation of a drug for carcinogenicity and the principles to be applied for its safe use are similar to the methods and principles which apply to the evaluation and use of a possible carcinogen in industry.

Much information lies hidden in the increasing mass of literature on the subject of carcinogenesis. This book is the result of an attempt to collect and present it in a form which can be examined and assessed by those who are not experts but who are interested in the subject. That it succeeds only partially is not the fault of the contributors or of the editor, Professor Truhaut. It stems from the fact that there is too much complicated material to be encompassed in a meeting of this type or duration, or in a book of this size. Nevertheless, the authors and the editor have succeeded in getting much into small bulk and in presenting it with a commendable degree of clarity.

T. S. SCOTT

Roe, F. J. C. (1965). The relevance of preclinical assessment of carcinogenesis. *Clin. Pharm. Ther.*, 7, 77.

Decompression of Compressed Air Workers in Civil Engineering. Proceedings of an International Working Party held at the Ciba Foundation, London, October, 1965. Edited by R. I. McCallum. (Pp. xxi + 329; 47 figs.; 31 tables; 42s.) Newcastle and London: Oriel Press. 1967.

This is the first book to be devoted to the particular problems discussed and the first book for more than 50 years to be published on aspects of caisson disease in compressed air workers. Since the classic works of Heller, Mager, and von Schrötter and of Leonard Hill, the emphasis has been on the related, but nevertheless distinct, problems of aviation and diving. From these adjoining fields the medical practitioner has learned much which he has applied to the particular problems of the compressed air worker, and, in return, the present study of man working in compressed air continues the invaluable flow of ideas and knowledge to those in these separate but related fields. Thus this book can be regarded as indispensable for those concerned with the prevention and treatment of all types of decompression sickness.

It is important to recognize that decompression from raised environmental pressures is becoming increasingly common both from under the sea and from compressed air, both nationally and throughout the world. The person who has worked in compressed air or as a diver may appear in any surgery or clinic. Thus these topics are important to an increasing number of medical practitioners and, of course, to all concerned with industrial medicine.

The International Working Party was primarily concerned at this meeting with an assessment of the decompression procedures used by compressed air

workers in different countries and, in particular, the prevention of decompression sickness in both its acute form and its delayed form—aseptic necrosis of bone. This book forms the edited proceedings of this conference which was attended by a small number of selected experts representing nine countries, all actively engaged in work at raised environmental pressures. Thus, in a series of papers, the current views on decompression procedures and their physiological basis, the effectiveness of the different decompression tables, the manifestations of decompression sickness, their prevention and treatment are presented by each group in turn. From these detailed reports emerges a composite picture which shows very well the present state of knowledge as well as defining those areas in which more work is required, particularly if the crippling complications of caisson disease of bone are to be prevented.

A criticism that a considerable amount of the discussions, which are presented in a lively verbatim manner at the end of each chapter, could, for greater clarity, have been incorporated into the text or into a brief summary does not detract from the value of this book as a whole. There is no doubt that the publication of these proceedings is an important contribution to this and related fields and that the information presented at this conference should be studied by all who are concerned with this unique, challenging, and important aspect of occupational medicine.

D. H. ELLIOTT

The Year Book of Orthopaedics, Traumatic and Plastic Surgery. (1966-67 Year Book Series). Edited by H. Herman Young and Ned Owens. (Pp. 444; illustrated; 76s.) Chicago: Year Book Medical Publishers. 1967.

This book is one of the Practical Medicine Year Books in which detailed abstracts of the important papers in the international medico-scientific literature are made available to specialists in different fields. As in all such volumes, the importance of the editor's selection of papers cannot be overemphasized. In this book there is a wide variety of abstracts in all three subjects of the title. Orthopaedic and Traumatic Surgery are grouped together, and there is a separate section on Plastic Surgery. From the point of view of a specialist in industrial medicine, the number of papers which could be regarded as having a direct bearing on his subject may not appear to be large. In the Orthopaedic and Traumatic Surgery section there are papers on the injuries produced by careless use of the high-pressure airless spray gun, on bone lesions in compressed air workers, with particular reference to the building of the Clyde Tunnels between 1953 and 1963 and on traumatic amputations. In the Plastic Surgery section there are a number of papers on the treatment of high-voltage electric and other types of burns, a paper on 'the crushed finger', and others on reconstruction after tendon injuries.

Apart from these, the book gives a very good review of the whole field covered, and the specialist in industrial medicine would find it useful to brush up his knowledge of many common disorders and some rare conditions;