Book reviews

NRCP Report No. 51, Radiation Protection Design Guidelines for 0.1-100 MeV Particle Accelerator Facilities. (Pp. 159; $5.00).

As is usual with reports published by the National Council on Radiation Protection and Measurements, the scientific evidence on which the recommendations in these recent monographs is based is painstakingly referenced and provides valuable background material for the reader. This type of document is arguably the best expression of the collective thinking of groups of scientists active in the field of study concerned, in presenting their conclusions for the guidance of other workers and the benefit of the public at large. Although the NRCP is an American institution its publications are of interest and relevance internationally.

Report No. 51 complements and in some instances supersedes previous reports. It considers particle accelerators in the 0.1 to 100 MeV energy range comprehensively for the first time in the NRCP series. It is written from an engineering point of view and directed mainly at designers of accelerator facilities. Thus the main chapter in the book is devoted to a detailed treatment of radiation shielding with worked examples, making use of the great wealth of data provided in 50 pages of appendices. Earlier chapters however review types of accelerators from the point of view of the radiations, both wanted and unwanted, which they produce. This material will be of interest to more general readers but the only concession to any technical limitations which they may have is a lengthy glossary of terms.

Report No. 53 will interest all those who have a responsibility for ensuring that radiation doses to occupationally exposed staff are kept within acceptable limits. The report restates the previous (1971) NRCP recommendation that 'during the entire gestation period, the maximum permissible dose equivalent to the embryo-fetus from occupational exposure of the expectant mother should be 0.5 rem'. This recommendation is backed up by a review of the current state of knowledge of the teratogenic and carcinogenic effects of embryonic and foetal low-dose irradiation. No new evidence has been adduced which indicates a need to revise the proposed dose limit. Although it makes some useful observations, the reporting committee feels unable to make detailed recommendations on the practical implementation of the proposed dose limit in the present social climate.

The dose limits to be observed in the UK are based upon the 1965 Recommendations of the International Commission on Radiological Protection which specify a maximum dose of 1 rem to the foetus during the term of pregnancy of an occupationally exposed woman. Nevertheless it is instructive to study the evidence and arguments which are presented in this report. C. B. CLAYTON


This small volume, written mainly in Italian, focuses particularly upon the immunopharmacology of Type I reactions, bronchial responses and dermatitis. It does not attempt to cover the full range of immunological responses in occupational medicine. The articles are brief, there are many useful illustrations and, particularly for the Italian reader, it forms an excellent review by internationally renowned workers of the recently developing field of occupational immunology.

The references at the end of each paper are relevant and helpful. It is a pity that there is no index because, even in a small volume, the value is greatly enhanced if it can be used for reference as well as for systematic reading.

This book, summarising a special symposium held in Milan in 1976, highlights the importance of studying those exposed in industry, using immunological techniques.

The contributions by Professor Pepys on patterns of occupational asthma, by Professor J. L. Turk on contact dermatitis and by Dr Bennich and Dr Johansson on techniques of measuring IgE are elegant and valuable, but unfortunately these are the only three in English.

M. TURNER-WARWICK


Bradford Hill published a series of articles in The Lancet in 1936 which were so well received that they were subsequently published as 'Principles of Medical Statistics' which ran to nine editions over the years to 1971. To celebrate his eightieth birthday, Sir Austin has extensively revised the text and published under a new title, new format and new publisher.

To those who have been brought up on earlier editions, little need be said except that the quality is as good as ever. Newcomers will doubtless wish to compare this with Swinscow's 'Statistics at Square One', published by the British Medical Journal, which also followed a weekly series of journal articles. Although there are relatively minor differences in methodological content, the essential difference is in flavour. Bradford Hill's years of experience show through in every line. He has struggled with his data, knows his subject backwards, and extracts the essential elements to illustrate each point. Of necessity, this makes for a longer book, explaining the pitfalls and fallacies in as much detail as the methods. On the other hand, he has chosen not to change his presentation of arithmetic in spite of