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## Book reviews

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**Protection against Ionising Radiation from External Sources. ICRP Publication 15.** (Pp. vii + 340; £1.40. Oxford: Pergamon Press. 1970.

This ICRP publication is an updating and consolidation of two previous publications, No. 3 issued in 1960 and No. 4 issued in 1964, and therefore includes recommendation for protection in the use of all sources of external radiation of energies up to 100 MeV. While concentrating on radiation arising from equipment used in medical diagnosis or therapy, it includes sections on industrial and veterinary use and paragraphs on the use of radiation in research and education. The purpose of the recommendations is to ensure a reduction in the radiation dose received by the operator and the patient to a minimum, but the Commission recognizes that some of these new recommendations are not at present practicable and that while their introduction at an early date is desirable, they should not be 'in such a way as to deprive patients of necessary medical attention'.

The publication is primarily intended for practising radiologists and radiological protection officers, and many industrial medical officers may find that the early paragraphs on dosimetry tax their mathematical ability, but any who are fortunate enough to have x-ray equipment in their departments are strongly advised to read paragraphs 150 to 192 on 'Protection of the Patient', and then have a close look at their methods of operation. It is in this type of private x-ray set that standards are inclined to lag behind even the average hospital. For example, how many pay strict attention to limiting the size of the field? And there must be few who meet the recommendation that this should not be larger than the film, and that 'the proper limitation of the field to the area of interest should be demonstrable on the film'.

The Commission certainly recognizes that we live in a permissive society in that they recommend we assume all 'women of reproductive capacity' are pregnant in the latter part of every menstrual cycle, and therefore non-urgent x-ray examinations, which include the lower abdomen in the field, be carried out only during the 10 days following the onset of menstruation. This would certainly cause considerable disorganization in a busy outpatient department and ignores the fact that it is just this society which allows us to question, without embarrassment, even the unmarried, and many of them to give with confidence an assurance that they are not pregnant.

The Ionising Radiations Regulations (Sealed Sources) were, to a large extent, based on earlier ICRP recom-

mendations, so that the industrial medical officer applying these regulations will be familiar with the paragraphs relating to industrial radiography. Under the section covering the uses of x-ray analytical equipment it is stated that 'adequate periodical medical examinations should be carried out, particular attention being paid to the eyes. . .'. If experience in the laser field is anything to go by, this is just the sort of recommendation that the legislators picked up and we find ourselves committed to unproductive annual medical examination by an ophthalmic specialist of all operators of the equipment.

Like previous ICRP publications the recommendations are set out in concisely written numbered paragraphs which make reference easy, and if I have criticized it because the targets set are sometimes outside our range, the recommendations can serve a useful purpose if only by making us raise our sights.

S. M. B. HILL

**Data Handling in Epidemiology.** Edited by W. W. Holland. (Pp. 212; £3.25.) London: Oxford University Press. 1970.

This book contains a selection of papers presented at the 5th International Scientific Meeting of the International Epidemiological Association, together with a number of additional chapters. The book is divided into seven sections, including ones on study design, collection of data, data processing, and analysis of data; the range is thus wider than the title would suggest. The opening chapter emphasizes that data handling in large-scale epidemiological investigation is a collaborative activity, involving epidemiologists, statisticians, and computer scientists; experts from these three disciplines have contributed articles which are often based upon their own specialized interests. It is not meant as a textbook, and by virtue of its origin there are breaks in the continuity of the argument from section to section, whilst the standard varies from chapter to chapter.

The co-ordinating editor's chapter on Study Design provides good cover of the principles involved, packed into only 10 pages. The section on Record Linkage is in some ways typical of the whole book; there is a good general review chapter by Heasman, which is followed by a chapter written by Massé giving descriptions of a series of specific problems involving French identifying and linkage systems. The section on Analysis provides useful chapters on multivariate analysis and models of