BOOK REVIEW

Radionuclide Techniques in Clinical Investigation by P W Horton.
Medical Physics Handbooks 12.
Adam Hilger Ltd., Bristol, in collaboration with the Hospital Physicists Association. June 1982 x + 172 pp.
£13.95 ISBN 0-85274-503-6

"Handbook: short treatise, manual, guide-book" (Concise Oxford Dictionary 3rd Ed.). This handbook is best classified as a short treatise on those topics which, to paraphrase the author's own words, involve the use of radioactive tracers to delineate physiological and pathological pathways. Organ imaging, the theme of many recent text books on nuclear medicine, is dealt with only briefly, in one section of four and a half pages. The preparation of radionuclides, scintillation counting and the effects of radiation on tissues are covered in the first four chapters; these are followed by three dealing with clinical measurement techniques, including a) measurements of volume and mass b) absorption clearance and uptake and c) blood flow. The book concludes with chapters on the simulation of physiological systems and radioimmunoassay. In the chapters on clinical measurement techniques the author's method is to describe the principles and illustrate these by numerous examples of their applications. Mathematical foundations are presented simply and clearly, and the methods of carrying out particular measurements are set out as working procedures. There are about 100 references and these include a number citing the original or very early papers on some well established procedures, such as the ^{51}Cr labelling of red cells (Gray and Sterling 1950), figures of merit for counting systems (Loevinger and Berman 1951) and the Schilling test (1953). The author is critical in his description of the various procedures, but has to leave to others the task of comparing the values of radionuclide and non-radioactive methods for assessing particular aspects of physiology or metabolism.

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There are about 60 diagrams or illustrations and the book is well produced. It should prove of value to persons entering the field of "nuclear medicine" from various scientific or medical backgrounds, and to those already engaged in particular branches of the field who wish to enlarge their background knowledge. Prospective readers should not assume from its general description as a "Medical Physics Handbook" that the emphasis is on physical foundations, dosimetry, the performance of counting systems and similar topics. It is an experienced physicist's account of a wide range of clinical procedures, supported by a clear though elementary description of the underlying physical foundations. For an introductory book of this size and scope the price does, even by current standards, seem a little high and one wonders if the publishers would not be able to make a useful reduction in cost by using suitable tough soft, instead of hard, covers.

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