BOOK REVIEWS

Pulmonary Physiology in Clinical Practice. W. R. Pace, Jr. Philadelphia, F. A. Davis Co., 1970, 184 pp., 54 illus., Price $4.25.

In writing "Pulmonary Physiology for Clinical Practice" Dr. Pace does well in presenting enough for understanding without discouraging detail. The book does, however, present what the reviewer considers errors due to attempts to simplify. For instance, the presentation of four categories of abnormalities in pulmonary function, (1) under-ventilation, (2) ventilation/perfusion ratio abnormalities, (3) diffusion defects, and (4) shunts, is weakened considerably by statements such as that on page 11, "This [ventilation/perfusion ratio abnormality] is the mechanism most commonly responsible for the hypoxemia and hypercarbia occurring in diseased states." The author presents the thesis that total under-ventilation and abnormalities of ventilation/perfusion ratios are essentially the same phenomenon. This ignores the necessary relationship of total alveolar ventilation to carbon dioxide production and the clinically useful concept that whenever CO₂ levels in the body are above the normal there is inadequate total ventilation and that whenever CO₂ levels are low or normal, but the arterial blood is hypoxic, there must be abnormalities of ventilation/perfusion ratios, a diffusion defect, or a shunt. This defect is found in Chapter 1, "General Concepts," Chapter 3, "Ventilation/Perfusion Ratios and A-V Shunt," Chapter 7, "Arterial Blood Gas Analysis," and Chapter 8, "Respiratory Failure." The reasons why normal CO₂ levels accompany hypoxemia in ventilation/perfusion ratio abnormalities, diffusion defects, and shunts are well presented by the author.

Chapter 2, "Abnormalities of Ventilation," is good, but I believe that under mechanics the effect of atelectasis and lung resection on overall compliance, or the concept of specific compliance should be mentioned before the discussion is completed.

Chapter 4, "Membrane Permeability," is good, simple and straight forward.

Chapter 5, "Interpretation from Office Testing" and Chapter 6, "Spirometry Made Easy," are very useful for anyone using a Collins 9-L spirometer. Referring to the "spirogrid," the "spirosecor," the "spirotractor," and the "ventilogrid slide rule," the author states, "by simple changes of scale in construction of these devices, or use of conversion factors this concept may be applied to any graphic recording system in which volume is plotted against time." Though this is true, the average clinician would be helped by a little more detail here.

In Chapter 7, "Arterial Blood Gas Analysis," the author's dismissal of all capillary blood sampling as useful only in detection of fairly gross changes in blood oxygenation is not justified. A reference to proper technic (with heating) and situations in which it cannot be used might be more helpful.

Chapter 9, "Clinical Management of Pulmonary Insufficiency," is necessarily too brief. References should be given to books on this subject.

Chapter 10, "The Language," and Chapter 11, "Tables, Formulae, and Equations" are good. The latter, however, should be referred to from the text. For example, on page 19, "any fluctuation of partial pressure of oxygen due to an alteration of ventilation must be matched millimeter for millimeter by equal change of CO₂ in the opposite direction" might well include a reference, for accuracy in detail, to the alveolar air equation on the bottom of page 150. The reader could then realize the statement refers only to an exchange ratio of one.

Though references, given alphabetically, have the full titles, thus identifying subject matter, one cannot find a reference on any
subject unless he knows the author's name. Arrangement by chapter, or numbering and insertion of reference to each at appropriate places in the text would make this section useful.

This book is recommended for the clinician who is first developing an interest in pulmonary problems, and wishes to make some measurements himself. If he continues in the field, he should want more by next year.

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**Therapeutic Advances in the Practice of Cardiology.** Edited by C. P. Bailey, A. G. Shapiro, and S. Gollub. New York, Grune & Stratton, Inc., 1970, p 470.

In 1969 Bailey and his associates assembled a group of cardiologists at St. Barnabas Hospital in New York for the second St. Barnabas cardiovascular symposium. The course they presented there is the basis of this publication.

The book is divided into six sections, and each section is followed by discussion with questions and answers. These sections suggest that the conference lasted 3 days with a section representing a half day of speeches with the speakers gathered at the end of the session for the discussion. The topics include the office practice of cardiology, surgical treatment of valvular heart disease, coronary heart disease, surgery of coronary disease, and finally two sections on progress in medical therapy. The greatest emphasis is given to those heart conditions amenable to surgery and these are treated in detail by the distinguished faculty assembled by Bailey and his associates. This book is a bench-mark of heart surgery in 1969, a survey of heart operations of the last decade, and an excellent introduction to current surgical problems.

In the sections on coronary disease great emphasis is given to the diagnostic role of coronary angiography. From their angiographic studies the Syracuse group (Gensini and associates) consider that the right coronary artery has supplanted the left descending coronary artery as the artery of sudden death. The most quotable sentence of the symposium is Magovern's: "The cardiac surgeon equates success with himself and failure with the pump, the prosthesis, or the patient."

On reading the various chapters, one is struck with the aura of the conference hall presentation that pervades the book. It is obvious that many of the contributions were submitted exactly as they were orally presented to a live audience. The illustrations are somewhat poorly done and probably are adaptations of slides presented at the various talks. These are minor criticisms. In the discussions that follow each section the conversation presented is essentially unedited. The badinage even among famous people calling each other by first names or nick names has a place in the actual convention of people but must be edited out in print for posterity.

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