

# Book Reviews

Burnell R. Brown, Jr., M.D., Ph.D., Editor

**Respiratory System** (The Giba Collection of Medical Illustrations, Vol. 7). By FRANK H. NETTER. Summit, New Jersey, Ciba Pharmaceutical Company, 1979. Pages: 328. Price: PNS.

The Giba Collection of Medical Illustrations, Respiratory System, is the seventh volume in the series. This work again confirms Dr. Netter's place as the foremost medical illustrator of our time. His unique artistic style combines the use of color, diagrammatic representation, and thoughtful layout to make each plate an instructive addition to the text. In fact, as the title suggests, the primary thrust of this atlas is the illustrations rather than the text, and rightly so. The pictures convey a tremendous amount of information to the incisive reader. Dr. Netter states, "My goal was to picture or diagram the essence of each subject, avoiding the incidental or inconsequential," and in this he succeeds admirably.

The author is assisted in his task by a group of widely respected specialists in pulmonary disease from across the country. The topics covered include anatomy, physiology, radiology, pathology, and diagnostic procedures. There is a tremendous amount of material covered in 300 pages, especially when it is designed as a broad overview of the respiratory system for the clinician. The literary style is in keeping with Dr. Netter's basic philosophy; it is clear, concise and without the usual medical jargon. There is a great deal of information presented here, much of which has only recently been elucidated, but the extensive bibliography drawn from recent and readily available sources allows the reader to pursue his particular interests in depth.

DAVID ROSE, M.D.  
*Veterans Administration Hospital*  
5901 East Seventh Street  
Long Beach, California 90822

**Cardiovascular Physiology for Anesthesiologists.** By RONALD J. GORDON, MARK B. RAVIN, AND GEORGE R. DAICOFF. Springfield, Illinois, Charles C Thomas, 1979. Pages: 209. Price: \$19.75.

Academicians and residents have long complained about the lack of a definitive, graduate-level, American textbook of anesthesiology. Two multiauthored texts are reputedly "in preparation," one of them for six years so far. But I suggest we already have not only a multiauthored American source, a multivolumed individualized one as well, making it much easier to borrow, to carry, and to use than one the size of an unabridged dictionary. The anesthesiologist may today assemble his own, personalized "textbook" from the collection of essays and monographs reviewed in this section of Anesthesiology in the last decade. I nominate this book by Gordon, Ravin and Daicoff as the introduction to the cardiovascular section. It is not a review of physiology, nor a medically oriented text, but is as the title suggests, "for anesthesiologists." It should suffice for board preparation or later study.

The particular strengths of this book lie in three topics, and are due to the enriching of physiologic concepts with description of pharmacologic alterations produced by the agents and adjuvants anesthesiologists use daily. Forty-five pages are devoted to blood rheology, concepts and applications. The non-Newtonian properties of blood, so important in understanding flow distribution, are clearly explained. I know of nothing like this elsewhere. Fifty-two pages introduce and elaborate Guyton's venous return model of the circulation. The intersection of a venous return curve with a cardiac

function curve fixes atrial pressure and cardiac output. While not entirely accepted by all cardiologists, this concept is nonetheless quite useful, and its general absence in the anesthesia literature makes this treatment invaluable. The book is worth reading for either of these topics alone. The third area of strength is the 43-page treatment of coronary circulation and the problem of ischemia. While this portion is neither unique nor exhaustive, it is current, solid and succinct.

The approach is fairly uniform, a semianalytic and inductive mixture. Empiric equations and approximations are not supported by presentation of evidence, but the inquisitive reader can find such in the references. The pathophysiology of anesthesia and useful rules of thumb are to be found, as befits an anesthesia text. Faculty members of training programs will find good material for lectures, chalk-talks and morbidity-mortality discussions in the many diagrams. A few of these diagrams, such as the relation between viscosity and shear rate, might profit from redesign. The published diagram suggests a non-Newtonian fluid is one whose viscosity decreases below that of a Newtonian fluid as shear rate increases, rather than one whose aberrant properties become negligible as shear rate increases.

These entirely laudable sections are accompanied by a too-brief, banal discussion of cardiac output and distribution, largely overlooking metabolic modulation; by a mercifully brief primer on electrocardiography, suitable for a nursing or premedical student; and by what should have been a brief account of one center's approach to congenital heart disease correction. The latter I am sure will be considered provincial and passé by trainees of other pediatric centers, just as all other approaches differing from their current institution's practice. Does any of us know the "right way" to do this? I doubt it.

There are some minor annoyances. Chief of these are diagrams inserted in pages beyond their respective citations. One actually seems entombed in the study questions that end each chapter. Some of the phrases are self-laudatory clichés: "having considered the cardiac output as a unified entity" (in five pages), "we have carefully examined", etc. The suggestion that right atrial pressure is given by a "standard physics equation  $P = \rho gh$ " is an unnecessarily complicated way to convert measured centimeters of water to millimeters of mercury. But by and large the text reads easily and clearly.

Where does this book belong? Not locked in a bookcase, gathering dust in the central library, nor under the clutter on a researcher's desk, but on top of the latest book-of-the-month selection at your bedside, or in the reading room or call room of the residents. The three strong areas are largely independent, and hence can be read independently, mastered in a few hours a piece at most. The weaker section can be read lightly for amusement, scanned for reassurance, or totally ignored without harm or prejudice.

THEODORE C. SMITH, M.D.  
*Department of Anesthesia*  
*University of Pennsylvania*  
*Philadelphia, Pennsylvania 19104*

**Selected Papers in Respiratory Therapy.** Second edition. By THOMAS J. DEKORNFELD. Garden City, New York, Medical Examination Publishing Co., Inc., 1979. Pages: 542. Price: \$20.00.

This volume is a compilation of 52 articles published between 1973 and 1977 on subjects relating to respiratory therapy, and