the reader is asked to pay an excessive price for two badly bound volumes with covers whose blue dye rubs off onto his hands.

A Practice of Anesthesia, also in its third edition, attempts complete coverage of the specialty in one volume. The two editors, their eight associate editors, and eight contributors are all at St. Thomas' Hospital. While this results in some uniformity of style, there is still much repetition, in part because the text is organized according to bodily systems.

There is much useful material here. Basic science is integrated with clinical practice in an informative way throughout many of the chapters. The material on muscle relaxants is particularly good. Yet the reader should not believe that, in this volume, he holds the entire field in his hands. Many important topics which should be included are absent (methoxyflurane renal toxicity, closing volume, PEEP, and 2,3-DPG).

In other areas the coverage is sketchy (modern theories of anesthesia and blood coagulation and its disorders). In still other areas, archaic remnants are to be found. The four chapters on local and regional techniques are almost identical to those in the 1966 edition. The chapters on computers and statistics are diffuse and poorly directed to the anesthesiologist, and the concluding three pages on sterilization of equipment are not in the authoritative and exhaustive tradition of the rest of the book. This text contains a great deal of information, replete with more than enough references, and attempts to cover the entire field including areas not attacked by Nunn and Gray. Yet it is not quite as up to date nor as impeccably accurate as one might wish.

In surveying these texts, one cannot help but be impressed at the growth of knowledge in the field of anesthesiology, and at the breadth of material included in the specialty. We can at once take pride in the (great breadth) of the field, and simultaneously understand why any single text does not flawlessly cover all of it. In so broad an undertaking, only a multi-authored text can hope for sufficient accuracy and depth of coverage. And the more authors, the more difficult the editors’ task of cross referencing, maintaining uniformity of style, and avoiding duplication. These three books, to various extents, demonstrate these problems.

Francis Bacon said, “Some books are to be tasted, others to be swallowed, and some few to be chewed and digested.” Each of these books contains sections which should be “chewed and digested.” Still, there is no single book which fulfills all the needs of the resident or practicing anesthesiologist, particularly one using American equipment. The challenge to produce such a work carries with it the responsibility to provide something more than already exists—and this will be difficult indeed.

**THE ANESTHESIOLOGIST'S BOOK SHELF**


The proceedings of the Conference on Bioavailability of Drugs, held in November 1971 at the National Academy of Sciences in Washington, D.C., provides a comprehensive exposure of views held by the health community regarding a drug product’s biological availability [degree and rate of absorption of the active ingredient(s)]. The purpose of bioavailability is standardization of drug products. Bioavailability (biologic availability) is not synonymous with therapeutic equivalence, although both require studies in the human.

A need for bioavailability studies is derived from the “generic equivalence issue,” that is, can a drug product which has not been clinically tested be equivalent in its performance to the clinically studied product? It is rare for a drug product to be pure (i.e., without excipients, lubricants, stabilizers, preservatives, etc.). Also, the methods of manufacture are usually not identical. Thus, chances for identical product manufacture would be a coincidence. Where carefully controlled human studies have been conducted, inequivalence has predominated.

The text stresses that proof of bioavailability requires study of absorption, metabolism, and excretion. A severe restriction in the pursuit of this proof is the lack of methodology for detecting minute quantities of the more than three thousand drugs to be evaluated. Although the main efforts of bioavailability studies are currently being directed toward oral medications, this does not imply that parenterals should not be investigated. Methodology, when possible, is required prior to marketing for those drugs under investigation.

The significance of this subject may seem obscure to the anesthesiologist who employs potent parenteral or inhalation agents with acute pharmacologic effects. However, the anesthesiologist is obliged to be concerned with other areas of patient care. To choose a relevant example from the Proceedings, one of the contributors notes a bioavailability problem with two manufacturers of digoxin; patients stabilized to one product showed a rise in plasma digoxin when switched to a second product, with signs of digitalis intoxication occurring in three of 19 subjects.

Human urine and blood concentrations have been the most common techniques employed, but the development of animal or in vitro models that correlate with human absorption characteristics is encouraged.

Until superseded by the knowledge or new direction of the problem, this book will serve the reader well in initiating bioavailability studies. I highly recommend it to physicians and basic science medical educators, irrespective of specialty, as a reliable source for becoming acquainted with the diversities of this topic.

**FREDRICK K. ORBEN, M.D.**
**HARRY WOLLMAN, M.D.**
**University of Pennsylvania**
**School of Medicine**
**Philadelphia, Pennsylvania 19104**

**WILLIAM J. MURRAY, M.D.**
**Duke University Medical Center**
**Durham, North Carolina**