## BOOK REVIEW



Milo Gibaldi, *Biopharmaceutics and Clinical Pharmacokinetics*. 4th ed. Philadelphia: Lea and Febiger, 1991.

Reviewing the fourth edition of any text is an exercise in determining what improvements have been made over previous editions, since the marketplace provides its own advanced review based on the earlier versions. Dr. Gibaldi's third edition, published in 1984, has been updated considerably in this latest edition. With 406 pages (compared to 330 in the third), the fourth edition has also seen the development of new sections and the addition of many new references. There has been no change in the number of chapters (15) or appendices (2). Many sections have seen considerable increases in discussion and the number of references (almost double), but a few are almost unchanged from the third edition. New sections include intraperitoneal administration, external and implantable pumps for continuous parenteral therapy, bioavailability of topical medications, cystic fibrosis as a disease factor, and cimetidine under drug interaction variability. Substantial expansion occurred in Chapter 12, which covers pharmacokinetic variability (body weight, age, sex, and genetic factors), and in such chapter sections as intra-arterial administration, spinal administration, regulatory and clinical considerations of bioavailability, induction and inhibition of drug metabolizing enzymes, active metabolites, and the discussions of various drugs in the chapter on individualization and optimization of drug dosing regimens.

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Overall, the fourth edition remains a useful, easy-to-read text with many effective illustrations for undergraduates studying biopharmaceutics and clinical pharmacokinetics. The references allow the student to pursue further understanding from the original research, and Dr. Gibaldi's commentary on the studies is well done and should be readily understood. I would recommend this text for use in a combined course in pharmacokinetics and biopharmaceutics or as an adjunct for individual courses. It was not designed to be a textbook for the teaching of basic pharmacokinetics and is therefore not adequate for such endeavors. Although the discussion of individualization and optimization of drug dosing regimens is good, this text would probably serve best as an adjunct to more indepth discussions of individual drugs for a course in clinical or applied pharmacokinetics.

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