

BOOK REVIEW

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Review of: *Disposition of Toxic Drugs and Chemicals in Man, 8th ed.*

REFERENCE: Baselt RC. Disposition of toxic drugs and chemicals in man, 8th ed. Foster City, CA: Biomedical Publications, 2008, 1720 pp.

How do you begin to review a reference book that most forensic toxicologists and many forensic pathologists have had on their shelves for years and simply refer to as “Baselt”? In pulling previous editions of this essential reference off my shelf, I noticed that 2008 marks the 30th anniversary of the first edition of this work. The first edition was a two-volume set divided between centrally acting drugs and peripherally acting drugs which had a combined 587 pages and contained monographs on 210 drugs and chemicals. Substances were grouped by class, rather than alphabetically, and the text was written in a narrative format without the subheadings that have been used ever since the second edition.

Since the second edition the format of this reference has not changed. Drugs and chemicals are listed alphabetically and topics for each substance include: occurrence and usage, blood concentrations, metabolism and excretion, toxicity, analysis and references. Each edition has built upon previous editions by updating the monographs and providing new references while deleting some references that are no longer as relevant. The eighth edition now contains monographs on nearly 1000 (959, if you're counting) drugs and chemicals. The beginning of each monograph includes information, if available, on the agent's half-life, volume of distribution, fraction bound to plasma protein, and, new for this edition, the blood to plasma ratio.

For those who may not have seen this book, the drug monographs begin with a very brief history of the drug, its uses and available formulations (although the latter is not intended to be all-inclusive). This is followed by data on blood drug concentrations after single therapeutic doses and chronic therapy and a literature review of pharmacokinetic data. The section on metabolism and excretion provides a description of the metabolites observed in blood including how they are formed and the different urinary metabolites with their elimination times. The section on toxicity generally includes a description of the drug's adverse effects, the effects of acute intoxication and the drug concentrations observed under such conditions. Drug concentrations observed in fatalities along with brief case histories are also presented. Finally, each monograph includes a section on how to assay for the drug and metabolites in biological specimens using a variety of instrumental methods reported in the literature. Figures include the chemical

structure for each agent and, where appropriate, the metabolic pathways. If there are data available, monographs often include a table describing the concentrations of the drug detected in fatalities in different fluids and tissues. While this is the format for most monographs in general, there are additional discussions that are relevant to a specific drug. The monographs for chemicals essentially follow the same format except that these monographs are generally focused on industrial exposure rather than therapeutic use.

That said, it is important to understand what this reference is and what it is not. It is an extremely useful tool for forensic toxicologists to research available analytical methods and to begin their quest in interpreting toxicological data. It is not, however, data that should be used out of context. Pharmacokinetic data are invariably based on normal, healthy human subjects and may be subject to considerable variation if this is not the case. Clinical data, while useful for living subjects, cannot readily be extrapolated to post-mortem situations. The author has wisely chosen to stay away from creating charts listing therapeutic, toxic, and lethal concentrations of drugs in blood that can dangerously mislead the user of such data. Instead, the reader can review a summary of the data that has been reported in the literature, and, using their expertise in context with a given specific case scenario and history reach their own, hopefully appropriate, conclusions.

As this is a reference work designed to aid forensic toxicologists in interpreting analytical data, the amount of information on pharmacology, pharmacodynamics, and treatment of intoxication is necessarily limited. I frequently find it useful to use this reference in conjunction with a classical pharmacology text and a medical toxicology reference book. In addition, there are little data in this book on drug interactions, for which there are many published sources.

This book has become quite large. While measuring 7 × 10 inches, it is also 3 inches thick. Unfortunately, the back binding is not much more than reinforced paper and has shown considerable stress just while I was preparing this review. Considering how much handling this book receives by most users, I suspect this edition may have more difficulty holding itself together over time than earlier ones. Finally, while I always prefer holding a book in my hands, I have long thought that a digital edition of this text is overdue. Hopefully, we will see a CD-ROM version accompany the next print edition. In the meantime, the forensic toxicology professional once again has an updated edition of what is probably the singularly most important reference in the field.

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