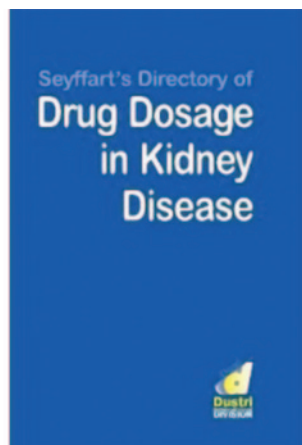


Seyffart's Directory of Drug Dosage in Kidney Disease

Kidney International (2012) **81**, 931–932. doi:10.1038/ki.2012.57



By Günter Seyffart

Dustri-Verlag Dr. Karl Feistle, 2011
870 pp, hardcover, US\$135.00
ISBN 9783871854002

Reviewed by Michael H. Schwenk

Any time a medication is prescribed, it is necessary to consider multiple variables in constructing a safe and effective dosing regimen. One such variable is the renal function, innate and sometimes also replaced, such as in a dialysis patient. Although on the surface this may seem a simple task, it is, in fact, often quite complex. For example, of the drugs covered in *Seyffart's Directory of Drug Dosage in Kidney Disease*, 11%

*Michael H. Schwenk is at Columbia University Medical Center, Research Pharmacy, Herbert Irving Pavilion, Room 7-749, 161 Fort Washington Avenue, New York, New York 10032, USA.
E-mail: Ms1204@mail.cumc.columbia.edu*

lack pharmacokinetic data, and 60% are excreted extensively in the urine (50–100% of the dose). Use of Seyffart's directory greatly assists the clinician in making a dosing determination.

Dr Seyffart is a nephrologist with more than 30 years' experience in toxicology, dialysis, pharmacokinetics, and the field of drug dosing in patients with kidney disease. This book consists of a brief introductory chapter containing a discussion of drug therapy in patients with renal disease and instructions on the use of the bulk of the text, which is composed of monographs for more than 1500 drugs, arranged alphabetically. The drugs are drawn from various European and North American pharmacopeias.

Each monograph contains the drug's name, molecular weight, usual dosage with normal renal function, pharmacokinetics, recommended dosing adjustments based on glomerular filtration rate or renal replacement therapy, and potential nephrotoxicity. Of note is the inclusion in the pharmacokinetics section of any specific metabolic pathways, for instance, the cytochrome P450 enzyme or enzymes involved.

In the introduction, Seyffart highlights the importance of drug metabolism, from the standpoint of how renal disease may affect it and how drug interactions may lead to either increased or decreased metabolism. With the advent of personalized medicine, it may

be possible to more precisely quantify drug interactions in individual patients, which can lead to better dosing strategies. Thus, if one drug's metabolism is inhibited by a concomitant drug, this would magnify a decrease in renal clearance; then either an alternate, non-interfering drug may be substituted, or an even greater reduction in dose may be required. To evaluate whether a metabolism-related drug interaction is possible, a website is cited (SuperCYP, http://bioinformatics.charite.de/supercyp/index.php?site=drug_interaction_checker).

Seyffart's is alone among textbooks in its emphasis on drug metabolism and individualized medicine in determining drug dosages in patients with kidney disease. He states that "it can be expected that the renal patient will belong to the group of patients who will benefit most from advances in personalized medicine."

The current text is a revision and expansion by the author of his book of 20 years ago.¹ Although there are review articles and numerous textbooks with chapters that address the topic of drug dosing in kidney disease, they typically include a much smaller number of drugs. There are two textbooks comparable to Seyffart's, but they are older and cover fewer drugs (2007, 518 drugs;² and 2009, more than 800 drugs³). However, both have online editions, whereas Seyffart's does not.

This book is an essential reference to all clinicians involved in the care of patients with kidney disease. Additionally, it is a good learning tool for those whose background in clinical pharmacology may not be as extensive or current. It provides a concise review of the information required for adjusting drug dosages.

Let us hope that it will not be another 20 years before an updated, revised edition of Seyffart's appears.

DISCLOSURE

The author declared no competing interests.

REFERENCES

1. Seyffart G. *Drug Dosage in Renal Insufficiency*. Kluwer Academic

Publishers: Dordrecht/Boston/London, 1991, 676pp.

2. Aronoff GR, Bennett WM, Berns JS et al. (eds). *Drug Prescribing in Renal Failure: Dosing Guidelines for Adults and Children*, 5th edition. American College of Physicians: Philadelphia, 2007, 272pp.
3. Ashley C, Currie A (eds). *The Renal Drug Handbook*, 3rd edition. Radcliffe: Oxford/New York, 2009, 794pp.