
Book Review

Drugs during Pregnancy and Lactation: Treatment Options and Risk Assessment, 2nd ed., by Christof Schaefer, Paul Peters, and Richard K. Miller: Academic Press, 2007.

Christof Schaefer, Paul Peters, and Richard K. Miller, three outstanding reproductive toxicologists-teratologists, are the editors of the book. The first edition of this book was published in 2001 and is one of several important books that helped scientists obtain the literature that deals with the risks of drugs and chemicals during pregnancy and lactation. Each of these books has a different format and goal but the underlying basic tenant is providing you with a succinct or extensive review of the literature dealing with specific drugs and chemicals. One of the early books that was published was the *Catalog of Teratogenic Agents* by Thomas Shepard. Then followed the reproductive toxicology reference books by Scialli et al. (1995), Briggs et al. (2005), and the *TERIS* publication by Friedman and Polifka (2000). There were two editions of the latter book, 1992 and 2000. We also have Schardein's extensive text on Chemical Teratology. Dr. Schardein has indicated that the book published in 2000 will be his last effort in that endeavor. Sever and Brent (1986) were the editors of the Teratology Society's Project that resulted in the publication of the Teratogen update. Each of these books have a different format and so it is worthwhile to have all of them in your library if you want to quickly examine the literature that deals with drugs and chemicals that may or may not affect the human embryo.

This particular text edited by Schaefer et al. (2007) is a multiauthored text, in that the editors do not author many of the chapters. I think it is important to list the titles of the various chapters and sections to give the reader an idea of how comprehensive this book is.

Chapter One is written by Miller et al. and is a comprehensive 24-page review of the subject of reproductive and developmental toxicology. It is an excellent chapter, ending with sections on communicating risks of drugs and pregnancy and a list of teratology information centers.

Chapter Two is titled "Specific Drug Therapy during Pregnancy." There are many sections to this chapter and it covers pages 28–822 so chapter two is the major effort to this publication. Different individuals who are respected members of the developmental biology and reproductive toxicology community author each section.

Chapter Three is titled "General Commentary of Drug Therapy and Drug Risk during Lactation" and it is written by Ruth Lawrence and Christof Schaefer and covers pages 609–620.

Chapter Four is titled "Specific Drug Therapy during Lactation" and is written by Christof Schaefer and Ruth Lawrence. There are 18 sections in chapter four dealing with specific drug therapy during lactation and all of them were written by Christof Schaefer and/or Ruth Lawrence. The titles of these sections are:

1. Analgesics, antiphlogistics, and anesthetics (Christof Schaefer)
2. Antiallergics, antiasthmatics, and antitussives (Christof Schaefer)
3. Gastrointestinal drugs (Christof Schaefer)
4. Anti-infectives (Christof Schaefer)
5. Vaccines and immunoglobulins (Ruth Lawrence and Christof Schaefer)
6. Cardiovascular drugs and diuretics (Christof Schaefer)
7. Anticoagulants and fibrinolytics (Christof Schaefer)
8. Antiepileptics (Christof Schaefer)
9. Psychotropic drugs (Christof Schaefer)
10. Immunomodulating and antineoplastic agents (Ruth Lawrence and Christof Schaefer)
11. Hormones and hormone antagonists (Christof Schaefer)
12. Dermatological drugs and local therapeutics (Ruth Lawrence and Christof Schaefer)
13. Alternative remedies, vitamins, and minerals (Ruth Lawrence and Christof Schaefer)
14. Diagnostics (Ruth Lawrence and Christof Schaefer)
15. Infections (Ruth Lawrence and Christof Schaefer)
16. Recreational drugs (Ruth Lawrence Christof Schaefer)
17. Plant toxins (Ruth Lawrence and Christof Schaefer)
18. Industrial chemicals and environmental contaminants (Christof Schaefer)

The developmental or teratogenic evaluation of the drugs or chemicals has been primarily written by one or at most two individuals. The summaries are brief but well written and provide a conclusion that would be useful to a physician looking for potential teratogenesis or developmental toxicity of a drug.

The editors have obviously edited the text very well. While it may be difficult to find the drug that you are looking for by the action of the drug that is listed in the various chapters, it is easy to find the location of the discussion of the drug in the subject index. The subject index, therefore, is a very valuable part of the book.

The chapter "Drugs during Pregnancy and Lactation" is a very comprehensive and well-written text dealing with the subject's title. One might ask do we need another book that is a reference for drugs and chemicals that may have developmental or reproductive toxicity? I think the answer is yes. None of the books that have been published are 100% complete with regard to all of the drugs and chemicals and, therefore, if you cannot find your answer in one book there is a good chance that you will find it in another one. Therefore, the addition of the text, which is now up-to-date since it was published

in 2007, may provide answers for some teratology or genetic counselors that they cannot find in the other books.

How do we compare all of the publications dealing with reproductive and developmental toxicity of drugs and chemicals as a source for obtaining preliminary information about your concern about a drug or chemical exposure in one of your patients? We can compare the various volumes because each has assets that the others do not have. For instance, Shardein's book on *Chemically Induced Birth Defects* has an extensive bibliography. There is also extensive reference to the animal literature in Shardein's book. However, the book was not written or intended to provide you with a risk assessment of various drugs and chemicals. None of this material is on the Internet so you cannot access new data because they are not being kept up-to-date.

The *Catalog of Teratogenic Agents* (Shepard) is just what it says. Fortunately, the drugs or chemicals are listed in alphabetical order so you do not need the index in order to find the agent that you want. The articles are briefly summarized and risk analysis is provided very infrequently. It gives the readers access to the literature to perform their own risk analysis. Fortunately, this text is on the Internet and is therefore kept up-to-date so the Internet resource is very helpful in getting the latest literature pertaining to a particular drug or chemical.

Scialli et al.'s (1995) book has excellent reviews but the drugs and chemicals are not listed by classification or in alphabetical order, but the index does list them in alphabetical order. The *TERIS* publication and website was created by Jan Friedman. The drugs and chemicals are in alphabetical order in the book and index. The material is kept up-to-date and the original authors of the first two editions have indicated that they do not plan another printed edition. *TERIS* is unique in two ways. The risk analysis is performed by a group of scientists and the quality of the data is also evaluated.

Drs. Richard Miller and Thomas Shepard are members of the *TERIS* group.

So why should the 2nd edition of this book edited by Shafer et al. be welcomed to your bookshelf? As mentioned previously, the editors produced a quality product. They have selected well-known and respected chapter authors and the important feature of this book is that the drugs are collated by their therapeutic purposes. This saves a great deal of time if you are comparing the relative developmental risks of therapeutic categories, i.e., antihistamines or sex steroids.

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