

## Book Review

# *A Review of Cardiopulmonary Bypass in Neonates, Infants, and Young Children*

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Richard A. Jonas and Martin J. Elliott, eds.

Butterworth-Heinemann, Ltd.  
Linacre House, Jordan Hill  
Oxford OX2 8DP England

Price: \$150

312 pages: 21 chapters

26 contributors

Offering contributions and editing by Richard Jonas, chief cardiovascular surgeon at the Children's Hospital, Boston, and Martin Elliott, consultant cardiothoracic surgeon at the Hospital for Sick Children, Great Ormond Street, London, this book draws together the latest research pertinent to pediatric cardiopulmonary bypass in twenty chapters affording the perspective of a wide range of clinicians. As is the danger in such a volume, some material is seen in more than one place. It is, for example, hard to avoid the mention of complement in reference to many aspects of bypass. Thankfully, the editors have done a good job outlining topics within four parts to avoid the repetition as much as possible. The chapters are found under the headings of: Physiology, Physiological Manipulations Employed During Cardiopulmonary Bypass; Practical Aspects of Cardiopulmonary Bypass; Pathophysiology of Cardiopulmonary Bypass and its Relation to Age; and Current Practice and Research Directions. There is an appendix of Perfusion Protocols and Equipment, outlining the procedures and equipment (down to cannulae) at the Children's Hospital and the Hospital for Sick Children. The Hospital for Sick Children has included a diagram and detailed description of ultrafiltration, which should look familiar to pediatric perfusionists.

The focus of this book (although it likely has applicable use as a textbook) is to describe the impact of cardiopulmonary bypass and circulatory arrest on the pediatric patient. The text explores in great detail many aspects of hypothermia, equipment effects, cellular physiology, catecholamine influence – in short, most relevant topics essential to understanding bypass at all, and certainly that involving pediatrics. Where the section is a summary, there are thorough enough references to afford indepen-

dent research. The editors have taken care to use research references in the most immediate form – parentheses versus minute footnoting – making quick recognition on the part of the reader possible (many studies will be familiar).

The contributing authors have been both helpful and honest in drawing only conclusions that have been made possible via scientific research. Wherever applicable, areas of needed study and research have been pinpointed. Thus, throughout the text and in the suggestive chapter on research direction, this book is a valuable source for anyone interested in pursuing research. The reader is able to make a practical assessment of what work has been done and narrowly distinguish which further theses must be proven to elucidate past research or begin understanding of new areas.

As is the case with many current medical books, this book is an expensive addition to the clinician's library. It may be hazarded that this is not a necessary mainstay of every perfusionist. Much of the material is familiar and thoroughly covered (although without specific reference to pediatrics) in other texts. The best recommendation might be that the book be purchased by the perfusion or cardiac surgery department to be shared, and especially to be made available to perfusion students. The teaching staff at perfusion schools, whether or not the center includes pediatric surgery, would benefit greatly from this resource especially as a means of referring students to research articles. The book would be very helpful in directing students to sources for papers and articles.

Lydia Jackson, BA  
Elmwood, New Jersey