

# Book Reviews

*B. Raymond Fink, M.D., Editor*

**Blood Banking and the Use of Frozen Blood Products.** BY C. R. VALERI. Cleveland, CRC Press, Inc., 1976. Pages: 417. Price: \$49.95.

The title is misleading, as the book deals primarily with frozen blood products; perhaps a more descriptive title would be "Frozen Blood Products." Doctor Valeri is an acknowledged leader in research with frozen blood products. He has published more than 60 articles on this subject, in addition to many others concerning nonfrozen blood products. In this book, he has capsulized all these studies and reviews the progression of component therapy and freezing technology in blood banking. Convincing information for the increased use of frozen blood products is presented. Washed, frozen erythrocytes account for only 2 per cent of all the blood provided by the American Red Cross in 1975. Frozen erythrocytes can be stored indefinitely and therefore can be available for people with rare blood types. Other advantages of frozen erythrocytes include marked reductions in posttransfusion hepatitis and cytomegalovirus infections, and elevated 2,3-diphosphoglycerate levels for better oxygen delivery. The freeze-preservation method also can be used to salvage or rejuvenate outdated universal-donor erythrocytes. The first 33 pages, which are concerned with nonfrozen blood banking, are disorganized, superficial, and in this reviewer's opinion, show misplaced emphasis. For example, one and a half pages are devoted to a discussion of storage containers for nonfrozen blood, yet a hemolytic transfusion reaction is mentioned in one sentence in the section on complications of blood transfusion. An uninformed person might assume incorrectly that complications from storage containers represent a major hazard while hemolytic reactions are hardly worthy of mention. The discussion of cytomegalovirus is longer than those of transfusion-induced coagulopathies, citrate intoxication, and transfusion reactions combined. However, the reader should continue because the remainder of the book is complete and well written. Most of the chapters compare the effects of various freezing techniques on the therapeutic effectiveness and survival of blood products. The chapter on the oxygen-transport function of preserved erythrocytes is the highlight of the book. It is the best treatise on the subject this reviewer has ever read, and attempts to answer the basic question: "Are shifts in the oxygen dissociation curve really important clinically?"

As Doctor Valeri suggests in the preface, the figures in most chapters are excessive and often too complicated. This probably is because most of the figures are borrowed from his other studies instead of being prepared specifically for this book. The reference list is very complete.

This book probably will not be useful to the average clinician, as there are better and more complete reviews on problems of blood transfusion. However, for those interested in possible future changes in blood preservation, it is unquestionably the most complete and authoritative text on frozen blood products.

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**Pathophysiology. Altered Regulatory Mechanisms in Disease.** EDITED BY EDWARD D. FROHLICH. Philadelphia, J. B. Lippincott, 1976. Second edition. Pages 866. Price: \$29.50.

This is the second edition of a book that first appeared in 1972. The Chief Editor's intent, as he states in his preface, is to present a way of thinking of disease. I am not sure just what he means by this, except to suggest that he feels that describing, first of all, the normal mechanisms, or regulatory mechanisms, as he puts it, and then describing their disruption during disease gives the clinician a new insight into the disease process and its therapy. To some extent, this may be true, because, for the most part, the chapters of this book are written by clinicians of known expertise with strong scientific backgrounds. However, I sometimes got the feeling when reading some of the chapters that I was reading an abridged version of a physiology text written by a clinician. To accomplish in depth the aims that the editors enunciate is, to me, virtually impossible in the space given.

To assist the reader, the book is divided into eight general sections, covering hematologic mechanisms, endocrine metabolic mechanisms, immunologic mechanisms, etc. Each of these is introduced by a section editor who may or may not have contributed a chapter in his section. The little introduction of the section editor does help to tie the chapters together and, on occasion, introduce new concepts that have been put into the book since its last edition. A nice idea is included at the end of each section—an appendix that, for the most part, is an annotated bibliography in which the editor points out references of major importance and gives a line or two to the reasons why he selected them, even suggesting areas within the references for special consideration.

Perforce, as I have stated earlier, in many instances only superficial treatment can be given. Obviously, the depth in which any pathophysiologic subject is explored depends on the editor and his desires. A good example is myasthenia gravis. Approximately two columns are awarded to this and, while the discussion is correct, it is very general and fails to include any indication that there are also postjunctional problems in the disease, which have emerged since well before this last edition came out.

However, the book is helpful and in some areas I was impressed by the lucidity of the descriptions and discussions, especially concerning the kidney and the liver. In many instances, the necessity for brevity will probably contribute to a clearer understanding by the reader who has limited time, such as a medical student or a busy practitioner. It is a book that could be helpful to the practitioner who wishes sometimes to look beneath his mechanistic and materialistic therapeutic methodology, or to the medical student who must scan vast quantities of material in a short period to pass examinations. Furthermore, the annotated bibliography is, without question, a real aid in concentrating on monographs or articles, which can be very helpful in reviewing a specific disease entity.

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