Acid-Base Balance

Alan Y. Cohen
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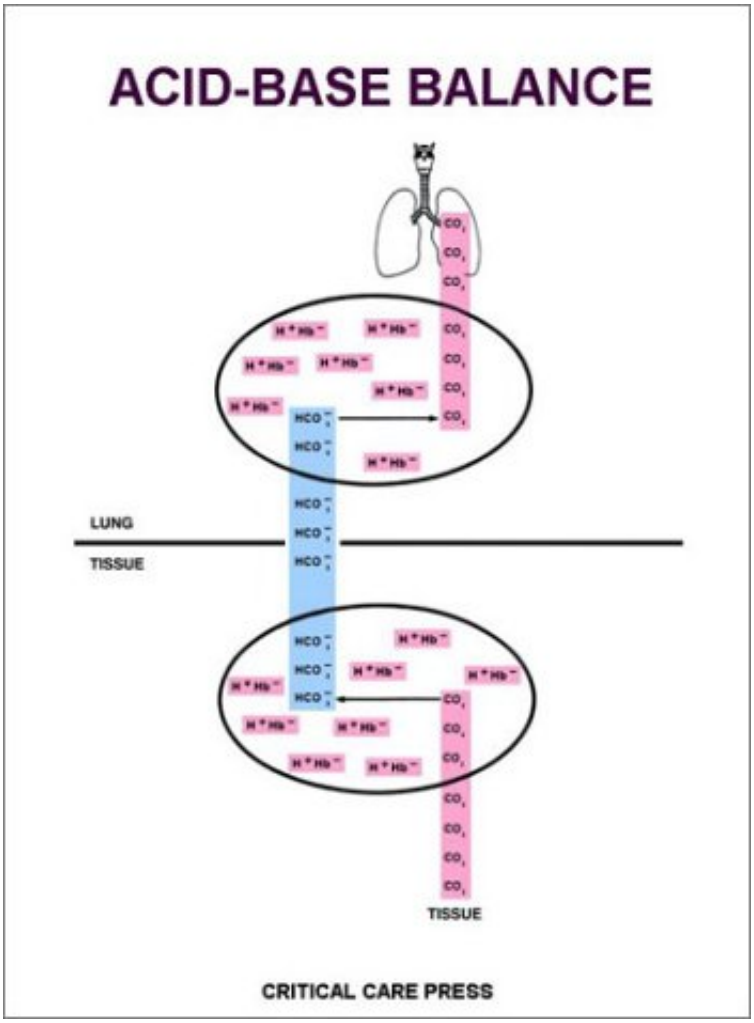

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Alan Y. Cohen : Acid-Base Balance before purchasing it in order to gage whether or not it would be worth my time, and all praised Acid-Base Balance:

6 of 6 people found the following review helpful. About time to understand acid-base!By Esmail Koushanpour PhDAcid-base balance has long been considered a very difficult subjectto understand but it is an every day task for health careprofessionals who must evaluate acid-base balance and electrolyteimbalance in their patients. I really liked this book because itexplains how acids and bases interact in the kidney, lung and totalbody in an easy to understand, quantitative and pictorial fashion,without complicated equations and calculations. This book would bevery useful for anyone involved in health care. It explains themetabolic pathways that maintain normal electrolyte balance and whathappens to cause electrolyte imbalance when these processes arealtered. It gives some examples of how electrolyte disturbances occurin conditions such as prolonged diarrhea or diabetes mellitus. Bymaking it easier to

understand the factors that produce electrolytedisturbance, this book helps the reader understand how to treat orprevent acid-base imbalance. As an author of a detailed textbook onrenal physiology, I think the unique aspect of this book is that thematerial is presented in an easy to understand way while alsoproviding complete explanations along with written, graphic andpictorial examples. This book provides a thorough overview of acid-base balance. As a physiologist and someone who taught acid-basephysiology for over 35 years to all levels of students includingmedical students, nursing students and allied health students, Ithink anyone involved in any aspect of health care would find thisbook helpful to enhance their understanding of acid-base balance andelectrolyte disturbances in the body. I highly recommend this bookfor anyone involved in health care.By: Esmail Koushanpour, Ph.D.Emeritus Professor, Northwestern University Medical School

ACID-BASE BALANCE presents a difficult subject in an innovative and easy to understand format. Complex mathematical formulas are replaced by clear color graphics. The pulmonary and renal roles in hydrogen ion regulation are presented in a balanced approach. Electrolyte balance is presented in clear, concise terms, with illustrations. The book contains 127 pages, with 53 illustrations, 43 of which are in color.

From the PublisherACID-BASE BALANCE is a must for anyone who practices in the critical care setting, including physicians, nurses, paramedics and EMT's.Excerpt. Reprinted by permission. All rights reserved.INTRODUCTION Acid-base balance has earned a reputation as a difficult subject to understand. This should not be the case. Presented in a logical fashion, with proper attention paid to the basic physiologic and chemical principles involved, acid-base balance should in fact be quite easy to master. This book attempts to "demystify" the subject, an understanding of which is a necessity for those who practice in the critical care setting. The text is divided into three sections. Section I deals with the basic chemistry and physiology of acid-base balance. Clinical acid-base disturbances are discussed in Section II. Finally, the relationship between acid-base homeostasis and electrolyte balance is described in Section III. The emphasis in Section I is on buffer systems--what they are and how they work. The dynamic nature of equilibrium systems and their relationship to buffers is also discussed. Pulmonary and renal control of plasma carbon dioxide and bicarbonate is explained. An understanding of topics discussed in Section I provides a foundation for mastery of the material in Section II, the clinical acid-base disturbances. Four basic derangements of acid-base balance are discussed in Section II (metabolic and respiratory acidosis and alkalosis). Illustrations are used to clarify the underlying processes responsible for each condition. The synergistic action of the kidney and lung in the repair of acid-base disturbances is stressed. Electrolyte disturbances associated with acid-base derangement are discussed in Section III. Here the focus is on primary and secondary deficiencies in potassium and chloride, usually seen in metabolic alkalosis. This text focuses on the "basic science" of acid-base homeostasis, the chemistry and physiology involved in maintaining a stable plasma hydrogen ion concentration. As such, it cannot, and indeed should not, serve as a definitive guide for treatment of clinical acid-base and electrolyte disturbances. Many excellent texts are available for this purpose. It is hoped, however, that an understanding of the material presented here will provide those who care for patients suffering acid-base disturbances with a clearer focus on the subject, resulting in more effective treatment.