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Book Review

Calcium and Phosphorus in Health and Disease, by J.B. Anderson and Sanford C. Garner

The divalent cation calcium plays a fundamental role in most metabolic processes. Although it is not known why calcium was chosen to play such a pivotal role in the evolution of life, part of the explanation is probably due to the fact that, as life evolved in the oceans, it took advantage of the abundance of calcium in its environment. With the evolution of the vertebrate skeleton, calcium also became an important building block of the skeleton. Approximately 350 million years ago, as life evolved and saw the opportunity to colonized terafirma, it was confronted with a major problem, i.e., this new environment was devoid of easily accessible calcium. It is this legacy of evolution that continues to plague the human race today. It is now well recognized that an adequate dietary intake of calcium is absolutely essential for the health and welfare of our skeleton throughout our lives.

Although these fundamental facts are well recognized by scientists and health care professionals, there continues to be confusion about the role of calcium in health and disease, and how much dietary calcium is actually required for maximum health. In the book *Calcium and Phosphorus in Health and Disease* edited by J.B. Anderson and Sanford C. Garner, there are 23 chapters containing important and highly relevant information that dispels many of the myths about calcium and phosphorus in health and disease. Although phosphorus is relatively abundant in our diets, and therefore, is not often looked upon as an essential nutrient, this book puts into perspective the important role that dietary phosphorus plays in health and disease. Maintenance of an adequate calcium/phosphorus ratio is by far the most important indicator for good bone health. This book provides important nutritional information about the calcium and phosphorus compositions in selected foods and gives a good perspective about the contribution of food groups for calcium and phosphorus consumption. In the chapter on Blood Calcium and Phosphorus Regulation, there is an excellent compilation of the physiologic significance of calcium and phosphorus on a wide range of biologic functions that is nicely outlined in tabular form. The schematic representation of how the calcium and phosphorus balance is maintained is very user friendly. The 23 chapters cover information about calcium and phosphorus nutrition, how the body handles calcium and phosphorus, and the various hormones that regulate calcium and phosphorus metabolism.

Five chapters of the book are devoted to the influences of various factors such as alcohol consumption, physical activity, aging on calcium metabolism and bone health. A review of the two types of osteoporosis and the epidemiology of osteoporosis puts into perspective the important role that dietary calcium plays in preventing osteoporosis and its consequence, skeletal fractures.

The formatting of this book makes it very user friendly. The book is divided into four sections with an introduction to each of the sections to give a short synopsis of the ensuing chapters. This format provides a perspective about the following chapters in the section so that the reader can choose within the section which chapter(s) is most pertinent to their needs. The figures are thoughtfully constructed, large, and simple for easy interpretation. Most of the figures truly enhance the comprehension of the concepts in the individual chapters.

Whether you are a student, nutritionist, physician, or basic scientist and have an interest in calcium and phosphorus nutrition in health and disease, this book should be on your reading list. It will serve as an excellent reference for most issues about calcium and phosphorus metabolism and factors that regulate these important nutrients. This book provides you with just about everything you could ever want to or should know about calcium and phosphorus metabolism.

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