
The editors of this book have assembled a comprehensive text that addresses all aspects of nutrition and bone health. The book includes much more than the role of calcium and vitamin D. The text is divided into 6 sections with 32 chapters authored by numerous well-respected researchers in the field of nutrition and bone health. Section 1 includes an introduction to osteoporosis; an overview of its epidemiology and public health effects; a discussion of nonnutritional risk factors for bone fragility, including genetics; a discussion of rickets and osteomalacia; and information on assessment of dietary intake. These chapters are useful for understanding the importance of the topic and the challenges of measuring dietary intake in research studies. Section 2 covers nutrition and bone growth, the role of calcium in the development of peak bone mass and in the reduction of post-menopausal bone loss, variability in calcium absorption, and the relation between calcium, vitamin D, and fracture prevention. Sections 3 and 4 include individual chapters on specific dietary components, including protein, sodium, phosphorus, acid-base balance, mineral waters, vitamin K, magnesium, trace elements, vitamin A, food groups, isoflavones, alcohol, and caffeine, and their relation to bone health. Section 5 includes chapters on a variety of topics, such as bone health among Asian and Middle Eastern women and the effects of weight loss, eating disorders, pregnancy and lactation, and physical activity on bone health. Also included are 2 chapters that illustrate the utility of studies involving twins and studies that assess nutrient-gene interactions. Section 6 ends the book with 3 chapters that evaluate the ability and cost effectiveness of nutritional interventions for preventing osteoporosis and specific recommendations for action. Overall, the information provided in each chapter is comprehensive and up to date. The text serves to highlight the adequacy of data with respect to specific nutrients and their potential effect on bone health, which may be small yet still clinically important. A clear and useful effort has been made by many of the authors to translate research findings into clinical practice guidelines. Many of the chapters begin with an introduction to dietary sources of nutrients and their metabolism, and these introductions should be particularly helpful for nonnutritionists. Some basic nutrition knowledge is assumed. Most of the authors assume that the reader has basic knowledge of principles of bone physiology and biology, and the terminology is advanced in some chapters. A chapter on basic bone biology and morphology would have been helpful for the introductory researcher to aid the interpretation of the various bone measures that are discussed. Because of the various levels of presumed knowledge, different chapters will appeal to and be appropriate for different readers.

This text will appeal to a wide audience, including undergraduates, graduate students, researchers, and health professionals. As with most edited texts that include contributions from multiple authors, there are some differences in authors’ perspectives, opinions, and writing styles. However, this does not detract from the overall value of this book. The book will be a valuable resource to anyone with an interest in nutrition and bone health.

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This book, authored by a medical doctor, is intended as a quick reference for physicians and other health professionals seeking information on vitamins, minerals, amino acids, essential fatty acids, and antioxidants and their potential application in prevention and therapy. The aim, as stated in the preface, is to strive for a middle ground between literature deemed to be “skeptical and stubbornly conservative” and writings deemed to be “biased and unsubstantiated.” Of course, treatment of known nutrient deficiencies in most persons can be dealt with along conservative lines that are based on generally well-studied cases backed by a scientifically secure literature and summarized in periodically updated publications that provide the US recommended dietary allowances and dietary reference intakes (RDAs and DRIs), the UK reference nutrient intakes (RNIs), and the like. Uncertainty arises from unsubstantiated suggestions for specific amounts of a nutrient to be given as preventive or therapeutic doses for diseases, often age-related diseases such as cancer or atherosclerosis, that are not solely the result of nutrient deficiency. Yet, this problem of not providing experimental bases for doses attends some of the literature underlying the suggestions made in this book.

The divisions of the book seem logical in view of the broad intent, although the title may be a bit misleading. Part I covers not only the conventional micronutrients, namely vitamins and trace elements, but also macronutrients such as calcium and potassium and even amino acids, essential fatty acids, and antioxidants. The