



Book Reviews

Dietary Reference Intakes: the Essential Guide to Nutrient Requirements, edited by JJ Otten, JP Hellwig, and LD Meyers, 2006, 560 pages, hardcover, \$44.96. The National Academies Press, Washington, DC.

I felt a sense of déjà vu when I started to examine and read this latest publication from the National Academies Press on the Dietary Reference Intakes (DRIs). Those of us who remember previous versions have long yearned for the good old days when the dietary standards were in one volume and easily obtained by walking to our book shelf. A protracted revision of the dietary standards has now given rise to the DRIs, which has been published over several years in several volumes. This book summarizes the basis of the new paradigm, presents the statistical foundations of such, and reviews, for each nutrient, how the Estimated Average Intake, the Recommended Dietary Intake, the Adequate Intake, and the Upper Level of intake were derived. Each nutrient is addressed in its own chapter, and all of the chapters have similar outlines and formats, which make them easy to read. There are 3 parts to the book: part 1 concerns the development and application of the DRIs; part 2 focuses on energy, macronutrients, water, and physical activity; and part 3 addresses vitamins and minerals.

Most of the chapters begin by explaining the function of the nutrient in the body (function, absorption, metabolism, storage, and transport) and are followed by a section on how the DRIs were determined, what special considerations were taken in their determination, food sources (including supplements) and bioavailability, and inadequate and excess intakes. Each chapter concludes with a checklist of "Key Points."

A shortcoming of the book is that it does not contain references; however, the reader is referred to the volumes of earlier works in which citations are available and Web addresses are given. Given the new age of computers and technology, it appears that the days of flipping to the end of a chapter to locate references to the cited works are over. Another shortcoming of the book is that it contains errors. For example, the value provided for converting vitamin A retinol activity equivalents from β -carotene is given as 24 in one chapter and as 12 in another.

I highly recommend this reasonably priced book for those who desire a convenient reference on the DRIs. Professors, health workers, and students alike should consider adding this book to their library.

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Nutrition and Cancer Prevention, by Atif B Awad and Peter G Bradford, 2005, 640 pages, hardcover, \$139.95. CRC Press, Boca Raton, FL.

This modest volume is entitled *Nutrition and Cancer Prevention*; however, it has virtually no clinical information useful for uninitiated health care practitioners or researchers outside the field of nutrition and cancer. The book is a compilation of fairly brief chapters on various substances that are classified as dietary components, including vitamins, carotenoids, synthetic vitamin analogs, minerals (calcium and selenium), phytosterols, polyphenols, isothiocyanates, and lipids (n-3 fatty acids, conjugated linoleic acid, and sphingolipids), with brief chapters on obesity and alcohol as risk factors for cancer. The list is neither adequately complete nor adequately detailed in its parts. Although some of the chapters, such as the n-3 fatty acids and colon cancer chapters by BS Reddy and the flavonoid chapter by J-R Zhou, are adequate, many others are overly brief and difficult to read. They are dense with references and often do not adequately explain the findings being discussed in a manner comprehensible to the reader. An additional weakness is the overemphasis of scientific results from the authors' own laboratories to the exclusion of other important work in the field. There is also a lack of information that is useful in bringing together the disparate topics covered in the book. How the various dietary components interact is not discussed adequately, except in a brief chapter on how dietary components protect against cancer. This chapter does not fully explain any of the mechanisms that are targeted, such as apoptosis, proliferation, or checkpoint regulation. Instead, where full chapters are needed, only brief paragraphs over a few pages are provided. This overview is wholly inadequate for researchers and too brief and full of jargon for the uninitiated reader. Therefore, researchers, including fellows and faculty interested in the field of nutrition and cancer, would be better served through careful reading of available review articles on these topics. Those new to the field would be better off finding a more definitive and clearly written text on this subject.

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Dietary Supplements and Functional Foods, by Geoffrey P Webb, 2006, 256 pages, softcover, \$79.99. Blackwell Publishing, Oxford, United Kingdom.

The use of dietary supplements in the United States and the United Kingdom is widespread, and it is also a growing practice in other industrialized countries. Many books and websites provide detailed descriptions of the various ingredients in supplements and advice on use, serving primarily as reference works to be consulted for specific information as needed. Geoffrey P Webb, a Senior Lecturer in Nutrition and Physiology at the University of East London (London, United Kingdom), takes a different approach in this book. He has provided a brief introduction to supplements, which is meant to be read from cover to cover.

The book's first chapter provides an overview of the growing use of supplements and the reasons for their use, the relative merits of various study methods to evaluate supplement efficacy and safety, the legal definitions of supplements, and the regulation of these products in the United States and United Kingdom. The second chapter includes a discussion of micronutrient adequacy, emphasizing the Reference Nutrient Intake (RNI) standard in the United Kingdom and secondarily the Recommended Dietary Allowance (RDA) of the United States [but without a discussion of the United States' Dietary Reference Intakes (DRIs)].

Most of the book examines individual vitamins, minerals, fatty acids—what the author calls “nonessential ‘nutrients’”—ie, glucosamine, chondroitin, *S*-adenosyl-*L*-methionine, choline, lecithin, carnitine, creatine, coenzyme Q10, lipoic acid, and methylsulfonylmethane—and 17 “plant and animal extracts,” including ginkgo, chitosan, and echinacea. Each substance's basic biochemistry, effects on human metabolism, recommended intakes, and provenance are explained, and one or more health-related claims—eg, ginseng for psychological well-being, athletic performance, and cancer prevention—are briefly evaluated. The book's best chapter provides a balanced discussion of free radicals, the oxidant theory of disease, mechanisms to limit free-radical damage, antioxidants in food, and the potential benefits and risks of antioxidant supplements.

This book's title suggests that functional foods receive substantial attention, but such is not the case. The final chapter addresses these products in a cursory way, primarily as a vehicle to discuss sterols and stanols, phytoestrogens (primarily from soy), and probiotics and prebiotics—ingredients that are also available in supplements.

Dietary Supplements and Functional Foods appears to be intended for health science students, at the college level and beyond, who, Webb says, “have limited specialist nutritional background.” However, it cannot serve as a well-rounded introductory text on the subject without providing extensive supplementary materials on such topics as the regulation of supplements and issues of product quality and labeling. The book

suffers from the inclusion of dated information on nutrient intakes and supplement use, and the reference list both is relatively small and omits superior and more up-to-date citations. Readers may be disappointed in the book's small size, given the broad and multifaceted nature of the topic, the high price, the emphasis on British nutrient standards and dietary or supplement patterns, and the degree of expertise of the author, who began to seriously study dietary supplement issues only ≈ 5 y ago.

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Nutritional Strategies for the Diabetic & Prediabetic Patient, edited by Jeffrey I Mechanick and Elise M Brett, 2006, 368 pages, hardcover, \$139.95. CRC Press, LLC, Boca Raton, FL.

Nutritional Strategies for the Diabetic & Prediabetic Patient, edited by Jeffrey I Mechanick and Elise M Brett, is one of several recently published books addressing the subject of diabetes and obesity. The proliferation of books that cover these subjects reflects the current interest by physicians and health care personnel in the pandemic of these diseases. Most nations in Europe, Asia, and South America report a rising prevalence of diabetes, with devastating consequences for the patient and a great burden placed on health care resources. The preface of this book states that it was written primarily to advance physicians' knowledge of nutrition as it relates to diabetes and to enable them to provide evidence-based recommendations to their diabetic patients. However, the book falls short of accomplishing these goals.

The book comprises 368 pages; the 15 chapters and 6 appendixes were written by 22 contributors, 9 of whom are from Mount Sinai School of Medicine (New York, NY). The chapters vary in quality and depth; some provide lucid descriptions of the subject, and some are rather superficial in nature. Most authors did not review the topics in the detail needed to provide a reference resource to physicians or they did not provide sufficient practical information to aid those in the daily practice of medicine in the care of their patients; in some cases, neither of those goals was met.

The chapter entitled “Mitochondrial function in diabetes: pathophysiology and nutritional therapeutics,” which has 389 references, provides an excellent in-depth review of the subject. The chapter entitled “Nutritional strategies for wound healing in diabetic patients,” which has 216 references, is unique and informative, whereas the chapter entitled “Carbohydrate counting” falls short. Indeed, it is very short: 5 pages and 7 references. The appendixes of the book do not add value for the reader.

A great need exists for information about diabetes and for methods that will help prevent or treat diabetes (or both). Nutritional strategies are indeed needed. Approximately 20–21 million Americans— $\approx 7\%$ of the US population—have the disease.

