

Book Review

Martha H. Stipanuk (editor). *Biochemical, Physiological, Molecular Aspects of Human Nutrition*, 2nd ed. St Louis, MO, USA: Saunders Elsevier 2006. £55.99 (hardback), pp. 1232. ISBN 1 4160 0209 X.

This book does what it says in the title, providing a cohesive comprehensive overview of the ‘biochemical, physiological and molecular aspects of human nutrition’. For each of the macro- and micronutrients it provides information on their basic chemistry and food sources, an extensive review of their absorption and tissue metabolism, and a consideration of their physiological impact at the whole-body, cellular and molecular levels. Although the book deals comprehensively with the recognised deficiency symptoms and diseases associated with inadequate intakes of specific nutrients, one criticism is that the information included regarding the association between intakes of particular nutrients and the development of multifactorial diseases, such as CVD and cancer, is often limited. For example, for vitamin E, the large body of recent evidence examining its inverse association with the development of oxidative stress-related pathologies is only briefly discussed. Limited and disjointed information, provided over a range of chapters, is available about the associations between dietary fat composition and the development of CVD or diabetes.

The book, with over 1200 pages, is logically divided into seven units, each containing three to ten chapters. Unit 1 includes chapters on ‘Nutrients: History and Definitions’ and ‘Guidelines for Food & Nutrient Intake (US)’ which provide a suitable foundation for subsequent sections. Also included in this unit is a chapter on ‘Non-Essential Food Components With Health Benefit’, which deals with nine individual groups of compounds including plant stanols and sterols, polyphenolics, and prebiotics and probiotics. Unit 2 details with

the ‘Structure and Properties of the Macronutrients’, which logically progresses to units 3 and 4, which consider ‘Digestion and Absorption and Metabolism of the Macronutrients’. Unit 5 presents the topic of ‘Energy’ and includes a useful chapter which deals with ‘Disturbances in Energy Balance’ including the aetiology of protein–energy malnutrition, obesity and its associated metabolic syndrome. The remaining units 6 and 7 dedicate an individual chapter to each of the dietary vitamins and minerals.

The first edition of this book was published in 2000, with about two-thirds of the original chapter authors contributing to the second edition. Each chapter is written in an ‘easy-to-follow’ format, with an outline provided, good use of subsections, basic figures, tables, and additional information boxes, such as ‘Nutritional Insight and Clinical Correlations’.

Overall, this is an excellent book, which provides an integrative nutrition text, combining successfully the disciplines of physiology, basic nutrition and nutritional biochemistry. It provides an in-depth comprehensive account of all nutrients. The book has potentially a large target audience being suitable for nutrition researchers, taught or research postgraduate students in nutrition or its related disciplines, and medical and healthcare professionals. Priced at £55.99 it is excellent value for money!

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