

Book review

Handbook of Vitamins, Fourth Edition. Edited by J. Zempleni, R. B. Rucker, J. W. Suttie and D. B. McCormick (Boca Raton, FL: CRC Press, Taylor & Francis Group, 2007). 608 pp. ISBN 0849340225, US \$149.95.

The well-known *Handbook of Vitamins* series aims to update the reader with current knowledge and concepts about the major vitamins (A [including carotenoids], D, K, E, niacin, B₂, thiamine, B₆, pantothenic acid, biotin, folate, B₁₂ and ascorbate). There is also a chapter on choline and chapters dealing with DRIs (dietary reference intakes) for vitamins, epigenetics, mechanisms of coenzyme function and the use of accelerator mass spectrometry in studying vitamin metabolism in humans. The latter is especially important given our dearth of knowledge of *human* vitamin requirements.

The fourth edition succeeds well, since each chapter is authored by experts who have made significant contributions to the field. I enjoyed and learned something from all the chapters. They are comprehensive, well-written and highlight the things

we do not know; it is surprising how few vitamin requirements have been accurately established for humans, nor are we often clear on how the metabolic roles of vitamins explain the precise symptoms of deficiency. Also, they do not neglect the historical aspects of the discovery of vitamins, such as the rat line assay for vitamin D, Casal's necklace, egg white injury and the effectiveness of lightly-cooked liver in treating pernicious anaemia. The book abounds in other interesting asides, e.g. that riboflavin deficiency may protect against malaria, ricebirds are a good model for thiamine deficiency, the name pantothenic acid is derived from the Greek 'from everywhere', pyridoxamine can be used to inhibit AGE product formation, and excess choline intake causes one to smell of fish. Each chapter is well-referenced and full titles of references are given.

I recommend the book as a solid reference text. The index is reasonably good.

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