

## Book review

Michael J. Gibney, Susan A. Lanham-New, Aedin Cassidy and Hester H. Vorster (editors) *Introduction to Human Nutrition*, second edition. Oxford: Wiley-Blackwell. 2009. £37.50 (paperback), pp. 384. ISBN 978 1 4051 6807 6

The first edition of this textbook proved to be highly popular and it has been adopted as a teaching and learning resource by many universities. Because of its reputation it is likely that the second edition, which promises revisions and updates, will be received with enthusiasm. The text continues to provide a thorough and contemporary introduction to the scientific basis of nutrition, diet and health suitable for all nutrition students and for other students where their degree contains a component of diet or nutrition, e.g. medicine, nursing, etc. On first reading it appears that little has changed from the first edition, but there are some additions to and rearrangements of chapters as well as improvements in the layout and presentation. Each chapter is written by international experts and leaders in the field and starts with key messages that outline the essence of the chapter. There are clear explanations of the subject material with detailed examples embedded throughout. Each chapter finishes with perspectives for the future which emphasise the forward-looking approach and acknowledge the role of current and future research. References and further reading provide convenient information to easily facilitate and allow lecturers to encourage their students to read around the subject.

The first chapter is an introduction to human nutrition with emphasis on the global perspective. This latest version recognises the need for ethical guidelines and a code of conduct for partnerships between food industries, UN agencies, government and academics to address global nutrition in sustainable programmes and sets the tone for the recognition of global issues. The next few chapters present the fundamental basic principles on which nutritional science is based and include chapters on body composition, energy balance and the metabolism and digestion of the macronutrients protein, carbohydrate and lipids as well as the micronutrients. Chapter 3 on energy metabolism remains a comprehensive and informative base to elucidate the calculation of energy requirements and provides an introduction to obesity. This new edition includes the additional input of Blundell's satiety cascade and more information on peripheral signals that affect food intake such as how leptin communicates with the central nervous system, the role of the hypothalamus and other satiety signals such as ghrelin, cholecystokinin, peptide YY and pancreatic polypeptide, for example. Bender's chapter on the vitamins provides excellent authority on absorption, metabolism, requirements

and toxicities of all the vitamins and makes an essential point of reference that readers can repeatedly refer back to.

The next few chapters go beyond the fundamental basis and explore the technicalities and validities of nutrient and dietary data collection. There is a chapter on measuring food intake which has been extensively updated and provides many more examples of the different methods available, so demonstrating how dietary analysis methods are implemented. This chapter will make an extremely useful aid for students contemplating suitable methodologies for dissertations. The chapter on food composition has been brought up to date with a section on nutrition and health claims, food labelling and nutrition profiling. The chapter on policy and regulatory issues has been rewritten to show awareness of globalisation both in terms of the food supply and governance issues. There is also insight into food regulation as it impacts on dietary choices. The chapter dealing with nutrition research methodology includes a new section covering experimental techniques that mentions cellular and molecular signalling and genetic manipulation. It seems likely that these themes will be picked up again in the second textbook in the series *Nutrition and Metabolism*.

The last two chapters recognise current global public health issues and cover food safety and food and nutrition-related diseases. These chapters help to distinguish this text from other introductory books. The final chapter has been rewritten for this edition. It presents an argument for the double burden of disease in developing countries – the persistence of under-nutrition and non-communicable diseases – and is an enlightening and thought-provoking chapter on which to conclude the book.

This book really does provide a thorough grounding in the scientific basis of nutrition presented by internationally renowned experts. This new edition of this clearly written and stimulating introductory book remains an essential text for both the undergraduate and graduate students' bookshelf.

I have no conflict of interest to declare.

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