

Book review

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Frans Kok, Laura Bouwman and Frank Desiere (editors)
Personalised Nutrition: Principles and Applications. Boca Raton, FL: Taylor and Francis Group. 2007. £55.09 (hardback), pp. 287. ISBN 0 8493 9281 0

This book does what it says in the title, providing a comprehensive overview of the principles and applications of personalised nutrition. It takes the reader through the various technologies being employed in nutrigenetics research, the state of advancement of the science, and the practical aspects of moving from our current more generic 'one-size fits all' approach to more personalised dietary recommendations based in part on an individual's genetic make-up. Unlike many other text books written on this topic, it does not overstate the potential of nutrigenetics, and presents the science in a balanced way. Although full of academic content, the authors take a very holistic, often philosophical, view. The text indicates that the research in this area is at a relatively early stage. It considers the strengths and limitations of current approaches and the steps which must be taken before nutrigenetics becomes a useful public health tool which can be used to provide more efficacious personalised dietary advice.

The book consists of eighteen chapters, divided into three logical sections: (1) Scientific Principles of Personalised Nutrition (chapters 1–11); (2) Personalised Nutrition and Stakeholders in Society (chapters 12–16); and (3) The Future of Personalised Nutrition (chapters 17 and 18). The chapters are written by leading biomedical, social sciences and public health experts in the field. In chapters 1–3, the basic principles of transcriptomics, proteomics and metabolomic technologies are introduced with consideration given as to how they can be used to provide mechanistic insight into the metabolic effects of dietary components, and their application in the provision of personalised dietary advice. Chapters 4–8 provide information about the state of advancement of nutrigenetic research in the areas of CVD, inflammation, diabetes, obesity and cancer. The authors point to the fact that although individual genotype–dietary component interactions demonstrate proof of concept, there is a great need to advance to more complex scenarios where multiple dietary (and other behavioural factors), physiological and genetic factors interact to determine health status. Chapter 9 deals with the complex interactions between genotype and metabolic

programming during pregnancy with chapter 10 discussing the contribution of genetic variation to taste and food intake. Chapter 11 coherently summarises important points raised in earlier chapters, whilst considering the translation of the research into public health benefit, and acts as an excellent lead into sections 2 and 3.

Section 2 begins with a chapter which provides insight into the views and practices of various stakeholders in personalised nutrition (scientists, consumers, athletes and health care providers). Chapters 13–16 consider consumers' perceptions of personalised nutrition and the likely potential of a more personalised approach to the provision of dietary advice on consumer behaviour and the factors which determine this. The section ends with a discussion on the many and complex ethical issues associated with personalised nutrition, which go well beyond the concern for who should have access to genotype information.

Section 3 concludes the book, by considering the future of personalised nutrition. Chapter 17 highlights the need for the development of large international collaborations, networks and data-sharing databases in order to harness fully the potential of available nutrigenetics data. The final chapter provides an overview of nutrigenetics within the context of current and future developments in food production and delivery systems.

Overall, this is an excellent book, which provides an integrated holistic and considered account of not only the science, but the social, ethical, policy and public health aspects of nutrigenetics and personalised nutrition. The book potentially has a large target audience, being suitable for nutrition researchers, taught or research postgraduate students in nutrition or its related disciplines, public health professionals and policy makers, members of the food industry and informed lay individuals. At £55.09 it is good value for money!

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