British Journal of Nutrition (2003), **89**, 841–845

Book reviews

V. Preedy, G. Grimble and R. Watson (editors). *Nutrition in the Infant: Problems and Practical Procedures*. London: Greenwich Medical Media Ltd 2001. £85.00. pp. 464. ISBN 1900151636

There is something of value in this book for many different kinds of people and because of this, it is a difficult book to review satisfactorily. It comprises thirty-nine relatively short but informative chapters written by thirty-three first authors, mainly from the UK and USA, but also from several European countries, Canada and from others further afield. Many of the authors are international experts in their respective specialities and their work has been combined to address a great many nutritional topics of relevance to the infant. As the book title suggests, subjects are addressed from the practical viewpoint of how the reader detects, measures and controls nutritional problems, or how the physician or society at large address specific nutritional issues. The chapters are somewhat loosely assembled but the editors have attempted to present subjects in the following order: anthropometry, feeding disorders and the use of enteral, parenteral and other invasive methods, infant requirements for trace elements, iron, essential fatty acids, dietary fibre, antioxidants, vitamins and the use of food fortification to address some of the major nutritional deficiencies; and a series of chapters looking at nutrition in specific circumstances, for example critical illness, HIV, diabetes, Crohn's disease, cystic fibrosis etc. The book ends with chapters on obesity, failure to thrive and three chapters on feeding the normal infant in which the relative importance of breast and formula feeding and of colonic fermentation for infant development are discussed.

In a book with so many authors and such a variety of subjects, it would not be surprising to find a great many styles of writing or inconsistencies in terminology and approach to the different subjects. There are some; mass units continue to be used by some authors even though molar units have been internationally accepted as units of preference for several decades now. In general, however, the editors have imposed a consistent style that is used effectively throughout the book. Each chapter begins with a short introduction to put each topic into context. It is usually followed by a historical section of variable length but the main emphasis of all the chapters is provided in the section on Practice and Procedures. Cross-references between chapters are provided where appropriate. Each chapter ends with a Discussion, but this would have been better called 'Conclusions'. All chapters are satisfactorily referenced and a useful subject index is provided at the end of the book.

The emphasis of the topics covered is primarily on problems of infants in the developed world. Nevertheless, the book opens with two chapters on protein energy metabolism (PEM) and there are very informative chapters on nutritional screening during emergencies and the use of oral rehydration solutions. Much of what is written on PEM is now widely practiced protocol but the nature of the condition means that it is often treated under conditions that are far from ideal and many questions concerning treatment still exist. Handling PEM is as relevant today is as it ever was, particularly with the resurgence in many parts of the developing world of many of the older tropical diseases as well as new ones like HIV. However, it would not be appropriate and I certainly do not have the space to discuss the merits of each chapter. Anyone who deals with or plans to deal with child nutrition will find useful information in this book: whether it is in the management of the acutely ill premature infant or community nutritional programmes; handling the psychological problems of self-induced illness (Munchausen's syndrome) or the problems posed by food intolerance; handling nutrition in the child with disabilities and the problems posed by obesity; the problems posed by liver disease, Crohn's disease, HIV, gastrointestinal resection etc.

For a student, this book is not cheap at £85 but, in the context of today's prices, the book is reasonably priced as it will serve as a useful guide on nutritional practice for students and teachers in many specialities and provide a valuable reference manual for libraries as well as individuals in the different clinical, biomedical and anthropological professions.

David I. Thurnham
Faculty of Life and Health Sciences
NICHE
University of Ulster Coleraine
County Londonderry, BT52 1SA, UK
di.thurnham@ulster.ac.uk

DOI: 10.1079/BJN2002771

Gerald Wiseman. *Nutrition & Health*. London: Taylor & Francis 2002. £12.99. pp. 198. ISBN 0-145-27874-0

This book aims to introduce the role of the human diet in maintaining a healthy body and preventing disease. This is an ambitious task for such a small book (198 pages), resulting in a book that covers a broad range of topics with little detail. Set out in forty-eight self-contained chapters, this book is easy to dip into and out of. It covers nutrition throughout life from pregnancy, lactation and infancy through to ageing. Then, there is a section on some food-related disorders (illness, anorexia nervosa and bulimia, obesity and weight control), and a section on food science topics (food labelling, food additives, food-borne illness)

including an interesting chapter on food toxicity and a useful chapter incorporating basic food hygiene entitled 'avoiding food-borne illness'. Next, there is food intolerance and allergy before looking at basic nutrition (macro- and micronutrients). There is a list of tables indexed at the front.

The chapters covering vitamins and minerals contain useful tables summarising food sources of each. In particular, there is a useful table of calcium sources for vegan diets, as much of the book relies on dairy produce as examples of calcium-containing foods. However, requirements for nutrients are not expressed using the reference nutrient intake (RNI). The author does attempt to justify this and gives definitions of recommended daily allowance (RDA) and RNI in the 'diet selection' chapter. However, I still feel this is confusing for readers with little prior knowledge, as even the age categories used and recommended amounts given in the book differ from those of the RNI. For example, calcium is expressed as 'satisfactory daily intakes' in this book using the age categories 1–8 years, 8–20 years and 20–60 years with no differences for men or women, whereas the RNI are categorized as 1–3 years, 4–6 years, 7–10 years, then there are separate recommendations for males and females.

Much of the information in the earlier chapters is nutrient- rather than food-based and so not for those with no previous knowledge and difficult to apply practically. As I read through the text, I did feel that the basic nutrition topics of macro- and micronutrients would have been better placed before rather than after the chapters on specific group requirements for this reason. A reader may find it easier to read the later chapters first. Some sections contain key points in shaded boxes.

This is a book that may have been suitable for Level One pre-registration students. However, I was not wholly satisfied with the accuracy of the book. For example, in the section on ageing, 100 g protein/d is recommended. Using the estimated average requirement for energy this would amount to 22 % of energy from protein. This is clearly in excess of current UK recommendations. Similarly, it suggests that 50 % of fat intake should be from polyunsaturated fatty acids, which contradicts Committee on Medical Aspects of Food and Nutrition Policy recommendations. These inaccuracies and others make it difficult for me to recommend this book even as an introduction. In addition, I did feel that it promoted the use of artificial supplementation of vitamins and minerals in the earlier chapters rather than encouraging an education approach to a more varied and balanced dietary intake. Some chapters express personal opinion rather than evidence-based recommendations; for example a suggestion about the peanut content of the diet of children with an atopic family history, or heating eggs and milk for those with allergies for these foods. Also, despite being written in the UK, where we know that the average intake of protein exceeds requirements, the author still recommends an increased protein intake in pregnancy. Whilst this may be theoretically sound it is an example of the theory not being applied in a practically useful way.

Some sections of the book are out of date. In a climate of 'baby-friendly initiatives' in hospitals and communities, I would have liked to have seen a more pro-breastfeeding chapter. Indeed, the 'medicines' section of the pregnancy and lactation chapter could have been more baby-friendly in view of the recommendations to breast feed for at least 3 months and preferably throughout the first year of life.

Disappointingly for me the chapter on 'diet selection' did not mention the recommendation of five portions of fruit or vegetables per day nor 'The Balance of Good Health'. Indeed, the author suggests 'two or more items of fruit each day' with no recommendations for the inclusion of vegetables other than as an energy source.

At £12.99 this is a reasonably priced book but for the reasons discussed, not one that I will be using often.

Dianne Wild
School of Health Sciences
Leeds Metropolitan University
City campus
Leeds, LS1 3HE, UK
D.Wild@lmu.ac.uk

DOI: 10.1079/BJN2003829

Reynaldo Martorell and Ferdinand Haschke (editors). *Nutrition and Growth*. (2001). Nestlé Nutrition Workshop Series Pediatric Program, vol. 47. £49.00. pp. 424. ISBN 0-7817-3467-3

The subject of nutrition and growth is rarely afforded the distinction of having a whole volume devoted to it, but here we have a top-rate text, well illustrated and comprehensively referenced. The chapters are derived from presentations of a Workshop held in Santiago de Chile (2–6 April 2000). The Discussion sessions, which took place after each of the presentations, were recorded verbatim and have been translated into the text. Not only does this add value to the volume but gives another dimension to the meeting and its deliberations.

The content in this book represents the contributions from scientists from the international community. The editors state that the objective of the workshop was 'to summarize major developments in the last decade in our understanding of the relationship between nutrition and child growth, with emphasis on developing countries'. Many of the presentations review recent trends and tabulate data, some of which are alarming. For example, there are 182 million stunted children under 5 years old in the world today, representing 33 % of that population.

The first chapter contains a comprehensive review of ethnic differences in patterns of human growth in stature and ably sets the scene for later chapters. The extent to which new (and old) reference data for the assessment of growth can be used for the screening and monitoring of children is addressed in other chapters. Amongst the other topics reviewed are recent knowledge about the causes of growth failure, the consequences of poor growth, preventative measures for growth failure at a public health level and the link between early growth retardation and later development of chronic disease.

One chapter named 'Nutritional causes of linear growth failure during complementary feeding' (Gibson & Hotz)

caught my eye. The fact that the emphasis of the text was on linear growth and not weight growth, as is so often the case, makes this a particularly useful reference. The sections on the adequacy of linear growth-limiting nutrients in the complementary diet are an example of the material covered. The authors expose a lack of evidence from appropriately designed trials which have assessed any benefit of Fe supplementation in early childhood and report that only two such trials have been published, and only one of these was double-blind in design. Clearly there is paucity of evidence arising from randomised controlled trials to investigate the influence that differing nutrient regimens have on linear growth (and other important outcome measures) during the period of early infancy, as this chapter has highlighted, though this may in part be explained by ethical concerns. This state of affairs explains why there is such a divergence of views (often resulting in heated exchanges between the various protagonists) on the optimal age for the introduction of complementary foods.

In summary, this is an excellent text which I would be delighted to have on my bookshelf to share with colleagues and students. A 'must' for anyone with an interest in nutrition in early life.

Jane Morgan
School of Biomedical and Life Sciences
University of Surrey
Guildford, GU2 5XH, UK
j.morgan@surrey.ac.uk

DOI: 10.1079/BJN2003830

Lisa Rapport and Brian Lockwood. *Nutraceuticals*. London: Pharmaceutical Press 2002. £29.95 (hardback). pp. 184. ISBN 0853695032

Nutraceuticals are a large and important market; however, information on the many new products continually entering the marketplace is lacking and claims made by manufacturers are often unsubstantiated.

The authors set out to discuss a small but specific group of nutraceuticals that are natural, complementary medicines but not covered under the 'herbal medicine' umbrella. The compounds selected are described as 'from food sources and are sold in pharmacological doses for ailments'. Eight compounds are discussed in the following order: glucosamine; octacosanol; proanthocyanidins and grape products; lycopene; carnitine; flax seed; melatonin; ornithine a-ketoglutarate (OKG). Most of this group are indeed classed as non-herbal alternative medicines; however both flax seed and grape seed do appear also in many herbal medicine texts.

Each chapter is sensibly broken down into: properties and structure; uses; contra-indications and side-effects; a brief conclusion. The 'uses' section includes information regarding clinical trials when available.

The first chapter on glucosamine concentrates on its use in osteoarthritis and discusses the factors indicating that it may provide benefit as a long-term alternative to non-steroidal anti-inflammatory drugs (NSAIDS). Initial trials show glucosamine is safe and can produce a decline in articular pain, but long-term clinical trails are needed. Octacosanol, the second product discussed, is used by athletes as an 'ergogenic aid'; however, trials are confusing and inconclusive due to the mixtures of compounds used.

The proanthocyanidins' (tannins, bioflavanoids, or polyphenols) main activity is their potential as antioxidants; grape seed in particular. The authors also discuss the activity of proanthocyanidins in relation to artherosclerosis (benefits of red wine, French paradox etc.), vascular disorders, anti-cancer, anti-viral agents and hair loss. The author's conclusions again highlight the lack of trials to provide evidence of efficacy.

Lycopene is a plant pigment readily available in tomatoes and red fruits. It has a number of possible modes of action but again the main one is as an antioxidant. Epidemiological studies suggest lycopene is beneficial in preventing cancer; but again, few clinical trials. The general suggestion from this chapter is to eat more tomato-based products rather than take lycopene supplements.

Carnitine is an essential cellular component synthesised in the liver and kidneys. It is available from meat and dairy products. Fundamentally this compound is depicted as being useful to patients taking drugs that decrease its natural blood levels, and to haemodialysis patients. There is some clinical evidence that as carnitine is present in high levels in heart muscle, and therefore giving carnitine to patients with heart disease may protect the heart against further damage. Carnitine's possible use in a number of other syndromes including Alzheimer's disease and HIV infection are also discussed.

The authors then discuss the controversy as to whether one should take flax seeds or flax-seed oil. They come to the conclusion that both may be 'promising value... particularly in the prevention of cardiac events' but most clinical studies have been small. Other uses of flax-seed supplements are described, such as its use in diabetes, autoimmune diseases and cancer, but there is less evidence available for its use in these cases. α-Linolenic acid is described as the active component and flax seed is the richest source.

Melatonin is described as a hormone used to prevent jet lag and in treating sleep disorders. It was a 'very popular topic for discussion' in the late 1990s. It is a substance with different regulations in different countries; it is a prescribed drug in the UK but may be sold as a food supplement in the USA. According to the authors, it is still 'hard to differentiate between unproven myth and scientific fact' in its use.

The final nutraceutical discussed is OKG, which exerts its actions through biochemical pathways and metabolites. The authors also describe a 'non-scientific Internet search' that led to many unsubstantiated claims that OKG improves the performance of athletes. However there is no scientific evidence supporting any effects on muscle growth, body-fat reduction or strength enhancement. There is some evidence described for the role of OKG as a standard feed for hospitalised and chronically ill patients but further research is needed.

The book's final conclusions are brief and tend to concentrate on the 'market trends', however it does provide a specific source of information and references for the selected compounds. As such it would certainly be a useful reference text for any library and for those researching the area.

Ronald R. Cutler
Department of Life Sciences
University of East London
Romford, London, EI5 4LZ, UK
R.Cutler@uel.ac.uk

DOI: 10.1079/BJN2002770

D. Bessesen and R. Kushner. *Evaluation and Management of Obesity*. Philadelphia: Hanley and Belfus, Inc. 2002. £21.99. pp. 190. ISBN 56053-469-9

The authors state that they hope that this book will provide practical, useful strategies and tools for primary-care physicians and health professionals who feel inadequately prepared to care for obese patients. As such, it certainly achieves these aims. This is an excellent textbook which provides readers with an overview of the evaluation and assessment of obesity and is packed full of useful management strategies. Even experienced practitioners will find something new to broaden their repertoire of skills.

Each chapter in the book deals with a specific issue and is written by a different author. Many of the contributing authors come from the Centers for Obesity Research and Education (CORE), so are practising specialists and have a wealth of experience between them. Each chapter is supported with a comprehensive up-to-date bibliography, which provides a useful additional resource. Overall, it addresses many of the questions our patients ask, such as the role of commercial slimming clubs, meal replacements and the use of very-low-energy diets.

I found the chapter on 'Setting up the Office Environment' particularly useful since it addresses one of the most significant obstacles to the management of obesity in the primary care setting, which is that of having sufficient time. It will certainly make me look at my own practice so that I maximise the time I have available. The practical element stresses the provision of an environment that is sensitive to the needs of the obese individual to the level of providing chairs without arms, large blood pressure cuffs, large gowns and privacy when weighing, hence all of the classic pitfalls that hinder the helping relationship. It also highlights the importance of integrating the expertise of various disciplines.

The chapter on 'Non-Prescription Weight Loss Products' provides insight into a growing market in the UK and gives the current evidence base for the efficacy of some of the best-selling products.

There is an extremely useful chapter on the management of childhood obesity in primary care. With the increase in obesity in children and the fact that specialist paediatric resources are limited, it is appropriate that primary care takes the lead in assessment and management of obesity in children. The information in this chapter should help ease concerns about how to manage childhood obesity safely, efficiently and effectively in primary care.

There is a whole chapter on obesity web resources that provides a valuable back-up for any health professional looking to research deeper into a particular area.

Does the book have any shortcomings? It does have an American focus with all of the authors and many of the examples and references being from the USA. In addition the system of primary care in the USA is organised very differently and the chapter on insurance coverage for obesity treatments is not relevant to the UK – yet!

As a personal preference, I would have preferred the text to be less dense and for there to be more illustrations and diagrams; however this may be a reflection of my increasing age!

Nevertheless, this is not a book that will sit on the bookshelf. It functions as a practical handbook and should be a useful resource to anyone managing obesity in the clinical setting.

Prakash Dhindsa
Division of Nutritional Biochemistry
University of Nottingham
Sutton Bonington Campus
Loughborough, LE12 5RD, UK
prakash.dhindsa@nottingham.ac.uk

DOI: 10.1079/BJN2003846

S. Scott and C. J. Duncan. *Demography and Nutrition. Evidence from Historical and Contemporary Populations*. Oxford: Blackwell Publishing 2002. £79.50 (hardback). ISBN 0-632-05983-4

The authors state (p. 1) that this book is ... 'concerned with the interactions between malnutrition and demography'. In the preface the authors state: 'Chronic malnutrition, from which the bulk of the population suffered, acting in a way that is not readily detectable, was the major factor that regulated human demography in historical times. Chronic malnutrition caused this effect mainly via three interacting mechanisms: (i) direct and indirect effects on the mortality of children from infectious diseases, (ii) down-regulating the levels of body fat and, hence reducing women's fertility and, most importantly, (iii) raising the levels of infant mortality because of inadequate nutrition of the foetus during critical periods in pregnancy.' 'Thus, the key to the regulation of human demography, ..., lies in the nutrition of the mother before, during and after pregnancy.'

The case made for the effect of chronic malnutrition on demography as clearly suggested in the preface is made largely from an analysis of historical data, and most comprehensively from one locality in England (Penrith). Obviously with historical data the best that can be achieved is an exploration of the association of trends, and drawing direct causal links is difficult. Inferences are made about

nutrition from infant mortality rates and crude food-supply data. The assertion that body fat regulated fertility in the past is by inference. These inferences may be reasonable, but as a nutritionist reading this book there were times when I felt the authors were over-generalising. The authors are clearly strong and expert in demography and it is clear that they are more secure in their knowledge in this area than in nutrition. At times it was hard going for a non-demographer to read some sections, particularly when the methodology was being described.

The authors make a number of statements about nutrition that are incorrect, or at least misleading. Some examples: on p. 6, '... animal fat is a critical source of essential fatty acids and fat-soluble vitamins'. 'Plant foods used alone generally cannot sustain human life, primarily because of a deficiency in essential amino acids.' 'Humans are not perfectly adapted to either dairy products or grains in their diet, witness lactose intolerance in Southern Europeans, allergies to cow's milk in children and celiac disease caused by intolerance to the proteins in wheat and some other grains ...'. On p. 7 they state: 'Rice is remarkably deficient in protein and inhibits the activity of vitamin A, even if it is available through other food sources ...'. The review on nutritional factors affecting body composition and regulation of fertility was superficial, particularly the section on leptin.

The argument in Chapter 1 as to which diet man was programmed to exist on is, in my opinion, a diversion from the main thesis of this book. As it is presented it is too superficial to be helpful. The main thesis of this book, supported by data mainly from England from the 16th century onwards, is that among agriculturalists who generally ate a poor diet, and based on few foods, this poor diet affected fertility and mortality and therefore had a profound effect on the demography of the country. Whether these populations were programmed to this or any other diet cannot be judged, nor is it important, in my opinion, for the thesis being presented. The discussion of these issues, although brief, distracts from the strength of the overall argument presented in this book, that chronic sub-optimal diet has profound effects on health. There are important lessons today: although acute famines are devastating in sub-sections of the population, the net impact is small compared with the massive, but less visible effects of subclinical micronutrient deficiencies related to poor people simply not having enough good quality food to eat, even though it is theoretically available. The authors rightly highlight that famine only becomes a big devastating issue when compounded by disruptions to the wider economic, social and political environment.

An important part of this book, and the major source of data presented is derived from data collected in Penrith from various sources from the 16th to the 19th centuries. Data from this population are presented in chapters 5, 6, 9, 10, and 13. Chapter 10 shows that oscillations in grain prices, and subsequent availability of food interacting with employment opportunities and transport, had profound effects on the population of Penrith. Chapter 5 presents a detailed description of the long-term demographic effects of various Penrith famines from 1587 to 1623. The authors conclude 'that outright famine had limited demographic effects in England, whereas malnutrition had serious subliminal and diverse consequences over many centuries'. The worst-off group were most adversely affected, although there appeared to be a complex interaction between poor nutrition and low fertility which kept the population growth rate down. Until the middle of the 17th century 25 % of infants died during the first year of life. As the infant mortality rate declined during the 18th century, the 1–4-year mortality rose. From 1557 to 1812 the percentage death rate in 0–14-year-olds was stable at around 40 % until after about 1750 when it fell to 32 %. A sustained period of low mortality after 1750 caused a population boom. It would have been a lot easier to read and integrate the complex threads of the interesting data from Penrith if the data had been presented more coherently.

The review of nutrition and pregnancy is excellent (Chapter 7), as are related chapters on iodine deficiency (12), infectious diseases (15) and diseases and malnutrition in the 19th century (16).

In the concluding chapter (18) the authors state (p. 331): 'The thesis developed in this book is that the change to an agricultural lifestyle imposed on mankind a diet that was not completely satisfactory and, for the great bulk of the population, superimposed on this were regular and seasonal periods of malnutrition. This persistent, subadequate nutrition was the major factor that determined the levels of fertility and infant mortality and so had a profound ... effect on human demography.' Further, 'by analysing the wonderful parish data series of England ..., and comparing the results with the seminal work of the group at Southampton that the key to the demographic control of human population emerges'.

Overall, the authors are to be congratulated on this book. Any criticisms should not detract from the important contribution that this book makes, and I felt the way they drew together and tried to understand a complex literature on nutrition in pregnancy and how it linked with historical and demographic data was excellent. Their synthesis of the evidence related to the fetal origins of adult diseases was excellent, as well argued as any I have read. This book provides important signposts for the future that we would do well to pay attention to.

Who will benefit from reading this book and what was the authors' target audience? The preface hopes that this book (together with two others they have written) will be of value to readers from a variety of disciplines. I am not sure what they mean by value; I am sure that demographers and anthropologists will enjoy this book. I think it asks a lot of nutritionists, but the effort is worth it.

Barrie Margetts
University of Southampton
Southampton General Hospital
Institute for Health, Research and Development
Southampton, SO16 7YD, UK
bmm@soton.ac.uk

DOI: 10.1079/BJN2003847