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.

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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.

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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.