Book reviews

Macroelements, Water and Electrolytes in Sports Nutrition. J. A. Driskell and I. Wolinsky, editors. Boca Raton, FL: CRC Press. 1999. US$89.95. ISBN 0 8493 8196 7.

Three times I have thrown this book in my office rubbish-bin, and three times I have retrieved it. I have retrieved it from the other rubbish there because I agreed to review it for this Journal. Why was it there? I put it there because I was alternately frustrated and infuriated as I read the contents. It may be better that a book provokes some reaction from the reader than that it has no effect at all, but there is a limit.

Throughout the book there is a fixation with recommended dietary allowances (RDA), yet the meaning and import of these seems to have been completely misunderstood by almost all of the authors. Some examples will illustrate this. We are told that: '75 % of the US population obtains less than the Mg RDA'. In the next sentence, we are told the significance of this: 'thus, 75 % of the population may be subjected to Mg deficiency'. My understanding of the RDA is that 98 % of the population may consume this amount or less without their intake being insufficient to meet their needs. The whole book seems to be built on this premise. Endless studies are quotes to show that significant numbers of individuals in various group of athletes suffer from nutritional deficiencies because their estimated intake is less than the RDA. Most of these people are getting more than their requirement, even though their intake may be well below the RDA. What about the enormous error in these estimates of intake? We should be concerned about those people who do suffer from nutrient deficiencies that may be due to an inadequate intake. This misguided and misleading approach totally fails to identify those individuals. In another chapter, we are told that: 'this quantity will meet the RDA of most individuals'. There is no RDA for individuals! Another trip to the rubbish bin.

I had difficulty in making it past Chapter 1, where we are told that 'one nutrient, when taken in large amounts (i.e. greater than 100 % of the RDA or adequate intake) [may] adversely affect the absorption or utilisation of another nutrient'. The same chapter later says that: 'In addition to foods, athletes may need to take a daily nutrient supplement that contains approximately 100 % of the recommended intakes of the essential micronutrients'. In addition to foods! Are we to assume that the normal diet of these athletes provides no micronutrients? What about those adverse effects? Is this confused and confusing, or am I just plain stupid? Chapter 1 also tells us that measuring the faecal loss of macrominerals in balance studies is a complicating factor that 'gives great individual variability'. But if you do not measure it, you cannot do a balance study and should give up science or work on something else. Elsewhere it is implied that such measurements are difficult, if not impossible. This is just not true. It is incredible that there is no mention in this chapter of the enormous variability in the training load of athletes in different sports, or of the great variability in body mass between, say, the female gymnast and the football or basketball player. Is body mass not a factor that will complicate the interpretation and RDA? Do we need to be told that: 'in a study of female athletes, nutrient supplements were shown to improve the intakes of nutrients'? Who says this was an improvement? An increase, certainly. Value judgements abound throughout this book, and are to be deplored. How can we have foods that are 'non-nutritious' (*sic*)?

On struggling through the first chapter, I had hoped that things would get better, but I was to be disappointed. There is a strong American bias, and there are repeated references to the US population: it was certainly surprising to see a major text without a single non-US author. The parochial perspective leads to some usages that will restrict the value of this book for the international community. How many non-Americans appreciate the significance of expressing energy values of drinks in units of 'kcal/237 ml'? Much of the published work on Mg balance in exercise has come from Germany: there is no reference to this literature. There is a strong tendency to refer to textbooks and to popular articles when we want sources of information. *Nancy Clark's Sports Nutrition Guidebook* is hardly an appropriate reference for the statement that 300–800 mg K may be lost in sweat during 2–3 h of exercise.

The above may seem unduly critical and probably reflects my personal biases. The authors and editors might be justified in taking umbrage at a negative review based on such opinions. Here, then, are some other reasons why I would actively discourage my students from buying this book. The intravascular chloride concentration is not 4 mmol/l as stated on p. 171. Students would be confused as to the average plasma Na concentration: it is 140 mmol/l (p. 120) or 154 mmol/l (p. 171)? These are simply two examples among many.

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Training in Food Processing: Successful Approaches. M. Battock, S. Azan-Ali, B. Axtell and P. Fellows. London, UK: Intermediate Technology Publications. 1998. £9.95. ISBN 1 85339 425 4.

Arguments pertaining to the reality or otherwise of an impending global food crisis have been with us for decades. Any intervention to address this issue is always welcome. The introduction of simple rural food processing technology to preserve and extend the shelf-life of food is an important part of the effort to meet the nutritional needs of our ever-expanding population. The present book is an excellent practical guide to the implementation of small-scale food processing in the developing world. The book is divided into

two parts. The first part concentrates on the importance of food processing training, course preparation, course implementation, monitoring and evaluation. The second section covers a series of ten case studies of training in food processing from Asia, South America and Africa. The case studies provide an excellent tapestry of the various cultural and country specific needs of food processing.

The book is written in a popular style. It is accurate and detailed enough as a practical guide for anyone thinking of running a course on food processing. Most importantly the book not only addresses food technology issues, but also the marketing aspects, a topic rarely covered by books of this kind.

Each section is copiously illustrated with photographs, flow diagrams and figures making it a lively and engaging read.

This is a book well-worth reading and should be in all libraries, specifically those in the developing world. Its wide use and application has the potential to make a difference to the lives of many in the developing world.

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