Defining optimal human nutrition requires both a temporal and a contextual framework. In this supplement of the Asia Pacific Journal of Clinical Nutrition, delegates to the 2nd Sanitarium International Nutrition Symposium held in Melbourne, Australia in April, 2002, explores the many dimensions of such a framework. The aims of the symposium were to explore new ideas in relation to nutritional priorities at each of life’s stages, to underpin these new ideas with excellent science and to promote nutrition science as a major foundation for influencing the development of public health policy. The participants critically evaluated present and emerging evidence for the careful definition of nutrition priorities at each of life’s stages. The latter spanned the new science of foetal nutrition;1–3 the changing nutritional emphases during infancy, childhood4,5 and adolescence;6,7 the concerns in the middle years for defining optimal and sustainable strategies for behaviour change if prevention of obesity and diabetes7 as well as cancer prevention8 are to become a reality; and finally consideration of the particular nutritional requirements in older age.9–11 In her paper, ‘Eating well, ageing gracefully’, Karen Charlton11 gave a timely reminder that the evidence base is already sufficient and in many cases overwhelming, for a role for serious consideration of nutrition and health at every one of life’s stages – and no less (if not more so) for the elderly!

The symposium began on a challenging note with Geoffrey Cannon providing the rationale for the ambitious task of drawing a ‘new world’ map for nutrition science.12 His opening address set the pattern for the rest of the conference in which contributors consistently asked delegates to look at current paradigms in nutrition science and to consider the possibility for engaging in paradigm shifts, such shifts dictated by an emerging or widening evidence base. The general principle was that nutritionists have been using an ‘old world’ map of nutrition science and education which has focused predominantly on the health of individuals. The ‘new world’ map saw nutrition science no longer captive to deep-rooted materialist ideologies such as the concept that animal food is superior to plant food, or the definition of good nutrition in terms of fast growth to relatively tall and heavy adulthood. Instead it was proposed that a balanced approach in nutrition science and public health policy development should give equal value to personal, population and planetary health, weighing the global consequences and implications of nutrition science. It was suggested that such a paradigm shift in thinking and approach would lead to a re-evaluation of our animal versus plant-based protein requirements, a development and treasuring of existing food systems in the context of the local terrain, climate and culture, and a fostering of the concept of eco-nutrition. The latter theme was importantly revisited by Noel Solomons in the final paper of the symposium. In an erudite and intensely reflective address, he asked delegates to consider the reach and impact of globalization on food, nutrition, and health, and as a consequence to explore the ethical implications of any advocacy of policies and programs to improve conditions in each of these areas.13

Rather than proposing a paradigm shift, Jim Mann, on the other hand, lamented the absence of a particular paradigm, with no currently available clear and widely accepted definition of levels of evidence that apply specifically to nutrition.14 A precise evidence-based approach has been developed in the clinical setting for the conscientious, explicit and judicious use of best evidence in making decisions about the care of individual patients15 and such an evidenced-based paradigm has hugely influenced not only contemporary approaches in clinical medicine but also in public health and epidemiology. However, in the fields of nutrition science and dietetics such an evidence-based approach still needs definition and promulgation, with initial steps in this direction currently being made.16 However, it is often still very difficult to discern the levels of evidence used to construct nutrition principles. The absence of a systematically collated evidence base remains a major factor in the confusion and discrepancies that arise from current nutrition recommendations and guidelines. Jim Mann presented a beguilingly simple but carefully considered three-tiered approach to grading levels of evidence in nutrition science14 which recognized the unique nature and specific limitations and strengths of nutrition research, and took into account the impracticality of expecting nutrition guidelines to be based on the outcomes of randomised controlled trials alone but
rather the careful consideration of the totality of all available evidence. It is anticipated that his reconstruction and establishment of a unique new model for evidence based classification of levels of evidence for nutrition research will now be widely promoted and utilized for health and government policy making.

Philip James alerted participants to the fact that increasing obesity rates have placed us in the middle of the most extraordinary transition in human nutrition ever seen. Data on the Asian obesity epidemic was carefully reviewed and discussed with respect to its implications for the rapidly increasing rates of type 2 diabetes mellitus and impaired glucose tolerance throughout Asia. The imperative of defining a response to this epidemic was highlighted, a response which should comprise, at least in part, redefinition of overweight/obesity in an Asian context, consideration of the role of maternal/foetal malnutrition in the pathogenesis of this epidemic and identification of the major preventive nutrients/foods for optimal maternal and foetal nutrition if this epidemic is to be arrested. The concept that the prevailing nutritional environment for mother and foetus was relevant to the obesity epidemic was explored at depth during the symposium. The hypothesis of foetal programming for an anticipated life of either ‘thrift’ or ‘plenty’ was put forward together with the postulate that subsequent rapid transition postnatally from a life of ‘thrift’ to a life of ‘plenty’ was a major predisposing factor for obesity and diabetes and their cardiovascular consequences. This concept was further developed by the notion of inter-generational foetal programming, with the realization that the oocyte from which an individual arises, develops in the nutritional environment of the grandmother’s uterus.

The Asian obesity epidemic paralleled what was described by Louise Baur as a blatantly visible and escalating epidemic of childhood and adolescent obesity in Australia. A 19–23% prevalence of obesity in adolescent Australian males and females was reported together with a trebling of obesity prevalence and doubling of overweight prevalence from 1985 to 1997. The conventional paradigm that overweight and obesity in childhood was just ‘puppy fat’ needs to be overturned by the overwhelming evidence that childhood obesity has far reaching consequences for current and future health status, with both immediate and long-term medical and psychosocial problems, including a clustering of risk factors for the development of cardiovascular disease and diabetes. A plea was made for broader recognition of the massive environmental changes that have led to this situation, for broadening of the resources that need to be brought to bear in obesity prevention, and for testing and evaluation of novel solutions in schools, the community and through partnerships with the food industry.

Although an international event, with a global focus and participants from around the world, the Melbourne locale of the symposium provided opportunity to also consider the insights provided by nutrition science in two specifically Australian contexts. The first addressed the food and health consequences of Asian and European migration to Australia with discussion of the nutrition-related health changes seen in both Australian migrants and their host citizens. The second explored the health consequences of European settlement for Aboriginal and Torres Strait Islander people with their subsequent transition from hunter gatherer lifestyle and a nutrient dense diet to a largely sedentary lifestyle and energy dense diet (with an increase in saturated fats and refined sugars). An indigenous Australian, Cindy Shannon, provided challenging insights with an outline of the key action areas where nutrition policy in this area must be developed if the alarming increase in incidence of Type 2 diabetes mellitus and cardiovascular disease in indigenous Australians is to be arrested.

After defining the scale of the nutrition-related diseases emerging at each of life’s stages, the symposium shifted focus, addressing the question of if and how nutrition health-related behaviours could be changed. There was an emphasis on the practical as well as the theoretical and philosophical dimensions of optimal approaches for translating the results of nutrition science into achievable health outcomes with general consensus that therapeutic nihilism with respect to nutrition behaviour change was part of the ‘old world’ map of nutrition science. Participants provided innovative approaches and practical examples for sustaining nutrition behaviour change. Boyd Swinburn outlined creative approaches that had been very successful, particularly the targeting of small changes in big volume food and nutrition related activities with a reminder to delegates of the major influence of nutrition claims and labelling. Tony Worsley asked whether nutrition knowledge could change food behaviour and presented a brief survey of the recent literature indicating that although the evidence for any influence of nutrition knowledge on food behaviour was mixed, recent work suggests that it may play at least a small but pivotal role in the adoption of healthier food habits. To impart such nutrition knowledge in a way that will change behaviour the stated priority was to teach principles, not just facts, and to disseminate and prepare information with careful consideration of the influences of prior beliefs and experiences on the food behaviour of any target population.

The conference more than met its stated aims of exploration of the many scientific dimensions relating to nutritional priorities and concepts at each of life’s stages. This compilation of the proceedings will provide much ongoing food for thought, food with a wonderful variety of flavour, texture, aroma and colour. The reader who tastes and ingests this food will be delighted by its variety, richly satisfied by its content and replete with its science.

References


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