Foreword

Eco-nutritional disease or nutrition and chronic disease

Mark L. Wahlqvist, AO, MD, FRACP

President, International Union of Nutritional Sciences

Our genes have not changed significantly in recent generations, but the ways in which they are expressing themselves have changed in profound ways. Whereas macrovascular disease (affecting the large and distributing arteries and their territories: heart, brain, limb, kidneys, eyes, genitalia); obesity; insulin resistance, type II diabetes and their complications; certain cancers like lung, breast, prostate, pancreatic, colo-rectal; osteopenia and osteoporosis; musculoskeletal disease, like osteo-arthritis; neuro-degenerative disease like Alzheimer's; and mood disorders, like depression, were scarcely in evidence 2–3 generations ago, they are now the leading causes of morbidity and mortality in economically advantaged communities, and form part of the 'double-burden of disease' (which includes nutrient and other food component deficiencies) in individuals, families and communities world-wide.

There can be a measure of chronicity about these health problems, especially as they may unfold on a background of partly definable 'risk factors', in populations where life expectancy is actually elongating and where there is more opportunity for these problems to express themselves. Their emergence raises fundamental questions about how certain factors which affect our health may act to both advantage and disadvantage, differentially at different life points from conception to grave, and how, increasingly, we must finesse the way in which we live and pay heed to our environment to achieve optimal health and wellbeing with longevity. For example, an abundant food supply may provide enough energy intake to spare us from stunting and premature death due to energy malnutrition, but not from obesity and its adverse sequelae later in life. Questions about nutritional status at conception, *in utero*, during growth, through puberty, and in adolescence; the quality, and not just the quantity of the food we eat, as well as eating patterns and the social role of food loom larger than before. Energy balance, predicated on physical activity and muscle mass and strength, and not just energy intake, is more precarious with the advent of sedentariness. and substance abuse – tobacco, alcohol, medication and more – now assumes greater relevance. Moreover, where we live and in what eco-system, how polluted or intact or resilient it is; how our food is grown, how the animals we eat are fed, how the food is transported, stored, processed and cooked are all important when these factors have time enough to operate, and when the systems are undergoing substantial and rapid change in ways which we may not have understood or have been able to manage in ways conducive to health.

A number of studies and new insights are, however, available to those in nutrition and the environmental sciences.

By the eve of my assumption of the Presidency of the International Union of Nutritional Sciences, I had concluded, together with a number of colleagues, that nutrition scientists must join ranks with environmental scientists in a partnership to understand better and address the crescendo of what increasingly looked like diseases, to which many might have been susceptible because of their particular genetic polymorphisms, but which were only now emerging and were mainly predicated on people's life and environmental situation: social factors; mood; food; physical activity; work-place and living arrangements. For food, its energy density and nutrition density and its variety (in turn predicated on biodiversity) had become key issues.

Under the aegis of the chairs of several existing IUNS Committees – those to do with Nutrition and Urbanization (Noel Solomons), on Transitional Nutrition (Barry Popkin), Nutrition and Pollution (Rainer Gross), Nutrition and Ageing (Mark Wahlqvist), a workshop was convened in Vienna prior to the 17th International Congress of Nutrition, along with the WCRF (World Cancer Research Fund). It was further supported by the Australasian Nutrition Advisory Council Chair, Mark L. Wahlqvist, which had been funded by the Sanitarium Health Food Company in Australia to customize the WCRF-AICR Guidelines for the Nutrition in the Prevention of Cancer[1] for Australia and New Zealand (http://www.anac-au.org).

The WHO (World Health Organization) had also resolved to increase its commitment to Nutrition and Chronic Disease by commissioning a new report and developing a contemporary strategy. The Vienna workshop,

Correspondence address: Mark Wahlqvist, Asia Pacific Health and Nutrition Centre, Monash Asia Institute, 8th Floor, Menzies Building, Monash University, Wellington Road, Clayton, Melbourne, Australia.
Fax: (+61) 3 9905 8146
Email: Mark.Wahlqvist@adm.monash.edu.au

represented in this issue of the *Asia Pacific Journal of Clinical Nutrition*, by commissioned refereed papers and workshop commentary, edited by Noel Solomons and Annie Anderson, has set the stage for the WHO report, now at an advanced stage.

The need that we now have is to understand this new global pattern of disease in a contextual and cohesive way. To tackle it risk factor by risk factor, and disease by disease, will be frustrating, costly, and divisive. This is not to say that understanding the mechanisms of these so-called chronic diseases will not be important (and, indeed it is very advanced), but much can be done to halt and reverse the current trend, through an integrated approach, perhaps articulated as an 'eco-nutritional' strategy.[2]

References

1. World Cancer Research Fund, American Institute for Cancer Research. 1997 Food nutrition and the prevention of cancer: A global perspective. American Institute for Cancer Research, Washington.
2. Wahlqvist ML, Specht RL. Food variety and biodiversity: Eco-nutrition Asia Pacific J Clin Nutrition 1998; 7: 314–319.