Preface

It is widely recognised that optimum nutrition in early life is the foundation for long-term health. However, there is continuing evidence of both under- and over-nutrition in early life being associated with serious health consequences, and there is currently an interesting scientific debate on what is an optimum growth velocity during this period. The 1,000 Days Initiative identified early life as the period from conception to the age of 2 years; however, there is now a view that this period could be extended to mid-childhood. From a policy perspective it is crucial that there is a continuum of optimum nutrition that extends from the mother to her child during the vulnerable periods of pregnancy, infancy and early childhood. This important issue of meeting nutrient needs in the first 1,000 days of life was the subject of a recent Satellite Symposium during the Power of Programming 2014 Conference held in Munich, March 13–14, 2014.

Professor Zulfiqar A. Bhutta, who is in the unique position of holding senior academic positions in Karachi and Toronto, was able to provide global insight into micronutrient deficiency particularly in low-to-middle-income countries. He and his research team conclude that while the optimal mode of meeting the recommended micronutrient intakes is an adequate diet, in some situations supplementation is also crucial and emphasises the need to systematically reconsider micronutrient supplementation, including iron folate, calcium and multiple micronutrients, and the relative cost-effectiveness of other nutrition interventions [1].

In early life the nutritional focus has predominantly been on pregnancy and infancy, and the period beyond the first year has received less attention. Early childhood is not only important for meeting nutritional requirements but is also a critical period for developing healthy eating patterns. Dr. Tamás Decsi and Dr. Szimonetta Lohner, from the University of Pécs in Hungary, highlight the data from several extensive studies that indicate that a large subpopulation of healthy toddlers consume foods with poor nutritional quality. From a European perspective they discuss the importance of ensuring adequate intakes of several key nutrients, especially vitamin D, iron and n–3 polyunsaturated fatty acids.

Professor Irene Cetin from Milan supported the view that in low- and middle-income countries micronutrient intake may not meet pregnancy requirements and that supplementation may be recommended from the beginning of pregnancy. However, in medium- to high-income countries, it is indicated that there is currently insufficient evidence to support a routine supplementation at the population level, except for periconception folate supplementation, and for most pregnant women, a more individualised approach is recommended with a specific focus on iron, calcium and vitamin D status [3].

During early life food safety is a primary concern as the immune system is weakened during pregnancy and is not adequately developed in infants, thus making mothers and infants especially vulnerable to the negative effects of non-quality food products. Commercial products provide an alternative to home-cooked foods

and in many parts of the world can offer a nutritional safety net for mothers and infants where local food supplies are insufficient and of poor quality. Dr. Manfred Eggersdorfer and colleagues from DSM Nutritional Products, Switzerland, highlight the key elements of quality control in the production processes of food products and emphasise the importance of a transparent approach to quality and safety that involves all stakeholders, including consumers, government, academia, policy makers and industry [4].

A key message from this Satellite Symposium is that nutritional insufficiency is a preventable cause of widespread morbidity and mortality and that both academia and industry can play crucial roles in addressing the nutritional needs of all mothers and their children and thus reduce nutritional inequality across low-, medium- and high-income populations.

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References

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