Issues in Complementary Feeding
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Contents

VII Preface

IX Foreword

XI Contributors

The Breastfed Infant as Reference

1 Breastfeeding and Complementary Feeding of Children up to 2 Years of Age
   Brown, K.H. (USA)

15 Does Breastfeeding Protect from Growth Acceleration and Later Obesity?
   Singhal, A. (UK)

31 Later Effects of Breastfeeding Practice: The Evidence
   Turck, D. (France)

Nutritional Quality and Safety

43 Traditional Foods vs. Manufactured Baby Foods
   Ferguson, E.L. (New Zealand); Darmon, N. (France)

65 Potential Contaminants in the Food Chain: Identification, Prevention and Issue Management
   Scanlan, F.P. (Switzerland)

79 The Microbiological Risk
   Morelli, L. (Italy)
Contents

Cereals in Infant Nutrition and Health Outcomes

91 Cereal Fortification Programs in Developing Countries
Bulusu, S.; Laviolette, L.; Mannar, V.; Reddy, V. (India)

107 Processed Infant Cereals as Vehicles of Functional Components
Domellöf, M.; West, C. (Sweden)

123 Functional Ingredients in the Complementary Feeding Period and Long-Term Effects
Agostoni, C.; Riva, E.; Giovannini, M. (Italy)

Complementary Feeding for Special Children

139 The Influence of Gluten: Weaning Recommendations for Healthy Children and Children at Risk for Celiac Disease
Guandalini, S. (USA)

157 Allergic Infants: Growth and Implications while on Exclusion Diets
Laitinen, K.; Isolauri, E. (Finland)

171 Weaning Infants with Malnutrition, Including HIV
Solomons, N.W. (Guatemala)

Meat and Dairy Products in Complementary Feeding

185 Adverse Effects of Cow’s Milk in Infants
Ziegler, E.E. (USA)

201 Whole Cow’s Milk: Why, What and When?
Michaelsen, K.F.; Hoppe, C.; Lauritzen, L.; Mølgaard, C. (Denmark)

221 Meat as an Early Complementary Food for Infants: Implications for Macro- and Micronutrient Intakes
Krebs, N.F. (USA)

235 Functional Fermented Milk Products
Brunser, O.; Gotteland, M.; Cruchet, S. (Chile)

251 Concluding Remarks

259 Subject Index
Preface

Issues in complementary feeding are among the preferred topics of the Nestlé Nutrition Workshops for many reasons:

(1) The dietary requirements of infants in the weaning period and the effects of the different dietary schedules later in life are still poorly explored on a scientific basis, and are mostly the result of family tradition, country socioeconomic background, and common beliefs.

(2) In developing and, to some extent, in transition countries, malnutrition and undernutrition start immediately after the first 6 months of life, that is after the period of exclusive breastfeeding. Therefore, plans to improve the nutritional quality of available solid foods to be introduced, as well as to educate mothers and families to better accustom their children to complementary feeding, have become an issue of considerable importance in public health interventions.

(3) In developed countries and urban areas of transition countries, early forms of qualitative malnutrition, starting in the complementary feeding period, are now becoming more and more common, with unbalanced supplies of both macronutrients and micronutrients.

(4) An increasing demand for food safety and regulatory norms is emerging from the consumers, particularly emphasized for the ‘unprotected’ and ‘weak’ segments of the population represented by infants. Both the media and public opinion are quite sensitive to any news raising questions on ‘hidden dangers’ within the food chain. Food companies, on the other hand, must rely on rapid mechanisms to protect the consumers and themselves from these ‘hidden dangers’.

(5) Finally, recent emphasis on the so-called ‘bioactive’ compounds is stimulating interest on the possibility of improving the quality of the dietary supply with either natural foods rich in bioactive compounds or industrially enriched foods.

Within this context, the contributors of the present workshop have tried to summarize the status of the art in five main areas pertinent to complementary feeding, indicating in parallel the possible emerging areas of interest for both public health and research. These are the breastfed infant as reference, the issues on nutritional quality and safety in complementary feeding, the different roles of cereals on one hand, and meat and dairy products (inclusive of fermented milk products) on the other, and, finally, the different needs and
requirements of special groups (e.g., infants with food allergy or celiac disease) have been thoroughly presented and discussed, taking into special consideration the functional value of nutrients and foods in terms of potential positive effects on later growth, development and health.

The different presentations and topics have therefore provided an opportunity to focus on the composite worldwide situation of complementary feeding; the venue in Manaus, in the heart of the Amazon forest, has been to some extent symbolic of a developed area within a developing region.

Speakers and discussants agreed that a 'holistic' approach is definitely necessary for successful complementary feeding. This approach should consider local resources, traditions, nutritional education, issues of hygiene and food safety and, last but not least, the emerging evidence from clinical trials on the different effects of macronutrients and micronutrients in different settings. Hopefully, the papers presented should be of interest for those dealing with infant growth in the various regions of the world and who have to indicate to mothers and families the more appropriate ways of feeding their children.

C. Agostoni and O. Brunser
Foreword

The 60th Nestlé Nutrition Pediatric Workshop entitled ‘Issues in Complementary Feeding’ was held in Manaus, Brazil, on 22–26 October 2006, and was our third workshop addressing the extremely important subject of complementary feeding and nutrition during the weaning period, since the creation of the Nestlé Nutrition Workshop Pediatric Program in 1981. ‘Weaning; Why, What and When’ was the topic of the 10th Nestlé Nutrition Workshop in New Delhi in 1984 (eds. Angel Ballabriga and Jean Rey); the topics dealt with in that workshop are illustrative of the fact that the role of early feeding in later obesity, atherosclerosis and hypertension and the importance of appropriate complementary feeding for intestinal immunity, were already well recognized at that time. Almost 20 years later, the focus of the 54th Nestlé Nutrition Workshop in Sao Paulo in 2003 was ‘Micronutrient Deficiencies during the Weaning Period and the First Years of Life’ (eds. John Pettifor and Stan Zlotkin), highlighting the effects of micronutrient malnutrition on behavior and development, on bone growth and mineralization, immune function and infections, and addressed specific strategies to improve micronutrient status, including targeted fortification of complementary foods. Since then, a considerable body of research has accumulated on areas closely related to complementary feeding such as the appropriate time for gluten introduction, allergy prevention, the adverse effects of whole cow’s milk during the first year of life and the importance of cereal-based complementary foods. Up-to-date reviews on these and other topics were presented by the invited speakers from five continents, reflecting the global concern for appropriate complementary foods and feeding practices.

We warmly acknowledge the excellent workshop program conceived by the two Chairpersons, Prof. Oscar Brunser from Santiago, and Prof. Carlo Agostoni from Milan, both of whom are world-renowned experts in the fields of pediatric nutrition and gastroenterology. Many thanks also to Dr. Marcelo Freire and his team from Nestlé Nutrition in Brazil for the efficient logistical support and for enabling the workshop participants to enjoy the wonderful Amazonian environment of Manaus.

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