

Contents

VII Preface

X Foreword

XIII Contributors

A Systems Perspective on Growth

1 Implications of Growth as a Time-Specific Event

LampI, M. (USA)

13 Elongation of the Long Bones in Humans by the Growth Plates

Hunziker, E.B. (Switzerland)

25 Critical Windows for the Programming Effects of Early-Life Nutrition on Skeletal Muscle Mass

Fiorotto, M.L.; Davis, T.A. (USA)

37 Fat Tissue Growth and Development in Humans

Arner, P. (Sweden)

47 Osteoblast Bioenergetics and Global Energy Homeostasis

Verardo, A.R.; Clemens, T.L. (USA)

55 Summary on a Systems Perspective on Growth

LampI, M. (USA)

Dietary Modulation of Growth and Body Composition

63 Breastfeeding, Breast Milk Composition, and Growth Outcomes

Lind, M.V.; Larnkjær, A.; Mølgaard, C.; Michaelsen, K.F. (Denmark)

79 Metabolic Regulation of Pre- and Postnatal Growth

Koletzko, B.; Kirchberg, F.F.; Hellmuth, C.; Weber, M.; Grote, V.; Demmelmair, H.; Standl, M.; Heinrich, J.; Thiering, E.; Uhl, O (Germany)

93 Complementary Feeding, Infant Growth, and Obesity Risk: Timing, Composition, and Mode of Feeding

Grote, V.; Theurich, M. (Germany); Luque, V. (Spain); Gruszfeld, D. (Poland); Verducci, E. (Italy); Xhonneux, A. (Belgium); Koletzko, B. (Germany)

105 Causes of Stunting and Preventive Dietary Interventions in Pregnancy and Early Childhood

Black, R.E.; Heidkamp, R. (USA)

115 Micronutrients and Child Growth: Current Evidence and Progress

Sharma, R.; Vaivada, T. (Canada); Bhutta, Z.A. (Canada/Pakistan)

127 Summary on Dietary Modulation of Growth and Body Composition

Koletzko, B. (Germany)

Nutrition, Brain Function, and Cognitive Development

131 A Nutritionist's Perspective on Behavioral Assessment

Carlson, S.E. (USA)

143 Assessing Neurocognitive Development in Studies of Nutrition

Colombo, J. (USA)

155 Neuroimaging of the Developing Brain and Impact of Nutrition

Deoni, S.C.L. (USA)

175 Effects of Nutrition on the Development of Higher-Order Cognition

Willatts, P. (UK)

185 Impact of Nutrition on Growth, Brain, and Cognition

Black, M.M. (USA)

197 Summary on Nutrition, Brain Function, and Cognitive Development

Colombo, J. (USA)

201 Subject Index