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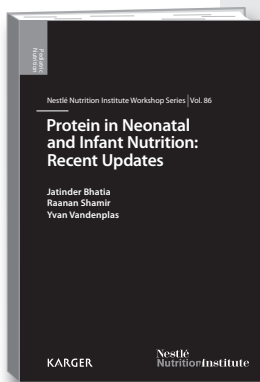
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Protein in Neonatal and Infant Nutrition: Recent Updates

Editors
Jatinder Bhatia
Raanan Shamir
Yvan Vandenplas

Protein in Neonatal and Infant Nutrition: Recent Updates

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Protein plays a vital role in growth and development and is able to 'program' healthy growth by influencing gene methylation for positive long-term health outcomes. The understanding of these mechanisms is critical to support and improve the health of future generations in both the short and long term. The first part of this book reviews the role of hydrolyzed proteins in infant feeding and the evidence-based benefits of their use in non-breastfed infants at risk of allergy and in infants with functional gastrointestinal disorders. The second part focuses on human milk and its potential alternatives in the feeding of healthy term infants. The final section is dedicated to preterm infants, their nutrition needs, and physiological capacities to ingest adequate amounts of protein for appropriate growth and development. Presenting the latest scientific findings on protein in early nutrition, this publication provides essential reading for pediatricians and researchers alike.

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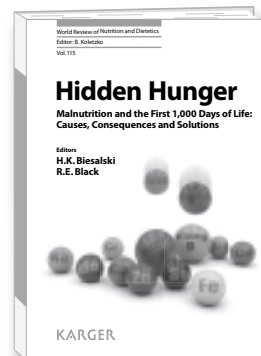
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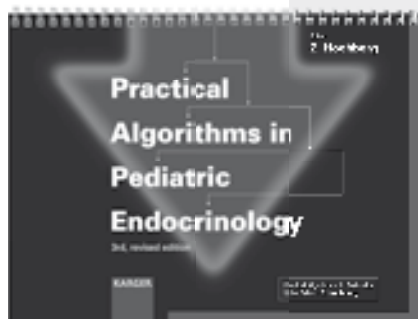
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Abstract

As nutrition-related chronic diseases have become more and more frequent, the importance of dietary prevention has also increased. Dietary fat plays a major role in human nutrition, and modification of fat and/or fatty acid intake could have a preventive potential. The aim of the guideline of the German Nutrition Society (DGE) was to systematically evaluate the evidence for the prevention of the widespread diseases obesity, type 2 diabetes mellitus, dyslipoproteinaemia, hypertension, metabolic syndrome, coronary heart disease (CHD), stroke, and cancer through the intake of fat or fatty acids. The main results can be summarized as follows: it was concluded with convincing evidence that a reduced intake of total and saturated fat as well as a larger intake of polyunsaturated fatty acids (PUFA) at the expense of saturated fatty acids (SFA) reduces the concentration of total and low-density lipoprotein cholesterol in plasma. Furthermore, there is convincing evidence that a high intake of trans fatty acids increases risk of dyslipoproteinaemia and that a high intake of long-chain polyunsaturated n-3 fatty acids reduces the triglyceride concentration in plasma. A high fat intake increases the risk of obesity with probable evidence when total energy intake is not controlled for (ad libitum diet). When energy intake is controlled for, there is probable evidence for no association between fat intake and risk of obesity. A larger intake of PUFA at the expense of SFA reduces risk of CHD with probable evidence. Furthermore, there is probable evidence that a high intake of long-chain polyunsaturated n-3 fatty acids reduces risk of hypertension and CHD. With probable evidence, a high trans fatty acid intake increases risk of CHD. The practical consequences for current dietary recommendations are described at the end of this article.

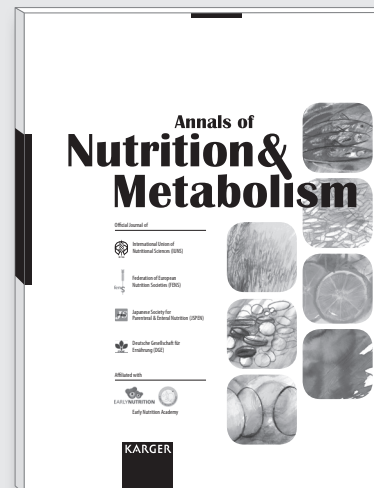
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Selected contributions

- Current Information and Asian Perspectives on Long-Chain Polyunsaturated Fatty Acids in Pregnancy, Lactation, and Infancy: Systematic Review and Practice Recommendations from an Early Nutrition Academy Workshop: **Koletzko, B.** (Munich); **Boey, C.C.M.** (Kuala Lumpur); **Campoy, C.** (Granada); **Carlson, S.E.** (Kansas City, Kans.); **Chang, N.** (Seoul); **Guillermo-Tuazon, M.A.** (Laguna); **Joshi, S.** (Pune); **Prell, C.** (Munich); **Quak, S.H.** (Singapore); **Sjarif, D.R.** (Jakarta); **Su, Y.** (Guangzhou); **Supapannachart, S.** (Bangkok); **Yamashiro, Y.** (Tokyo); **Osendarp, S.J.M.** (Berkel en Rodenrijs/Ottawa, Ont.)
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- Transmission of Obesity-Adiposity and Related Disorders from the Mother to the Baby: **Yajnik, C.S.** (Pune)
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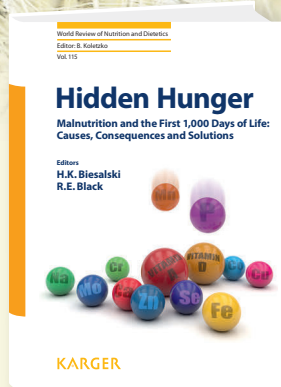
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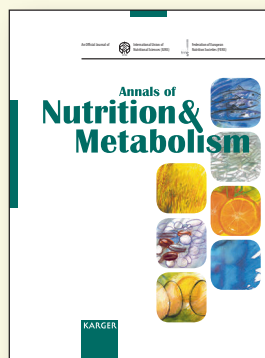
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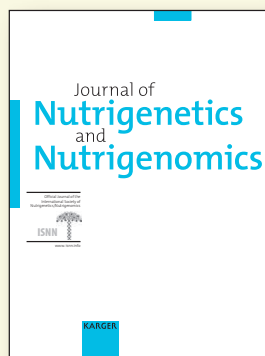
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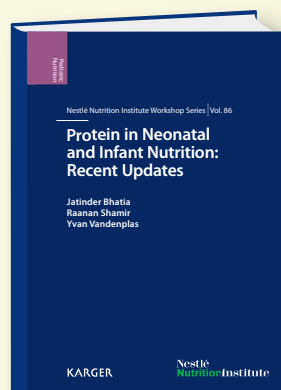
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