



MEDIA RELEASE

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Study sheds new light on why breast-fed babies grow more slowly

Breast-fed babies grow more slowly than formula-fed babies, which is why new growth charts, based solely on the growth patterns of breast fed babies, are being introduced in the UK in May. This slower pattern of growth in the first year of life is possibly one reason why breast-fed babies are less likely to become overweight children later on. A study published on-line today (24 April 2009) in the American Journal of Clinical Nutrition has found evidence that the lower protein content of breast milk compared to formula milk explains the slower growth rates seen in breast fed infants.

The study was a multi-centre intervention trial in 5 European countries, co-ordinated by Professor Berthold Koletzko from the University of Munich, Germany.

Over 1000 infants were randomised to receive infant and follow-on formulas with lower or higher protein content for their first year and were then followed up for 2 years. A group of breast fed infants were also followed up for comparison. After 2 years, the infants fed the lower protein formula were the same height but weighed slightly less than the infants fed the higher protein formula and were more similar to the group of breast fed infants. Since there was no difference in height, the difference in weight was probably due to a difference in body fat. Lower protein intakes in infancy therefore might protect against later obesity. The children are being followed up further to see whether those given the lower protein formulas have a reduced risk of obesity later on.

“These results from the EU Childhood Obesity Programme underline the importance of promoting and supporting breastfeeding because of the long-term benefits it brings. They also highlight the importance of the continual development and improvement in the composition of infant formula,” said Professor Koletzko.

“Limiting the protein content of infant and follow-on formula can normalize early growth and might contribute greatly to reducing the long-term risk of childhood overweight and obesity,” continued Professor Koletzko.

ENDS / Notes for Editors follow

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Notes for Editors

1. The study was carried out as part of a much larger ongoing research project funded by the European Union to investigate the effects of early nutrition on later health outcomes, the Early Nutrition Programming Project – EARNEST (www.metabolic-programming.org). This 5 year research programme is following up a number of intervention trials in early life to see whether the interventions have long term effects on programming various physiological functions. Together with studies in animals to investigate possible mechanisms and observational studies in large numbers of people, the project hopes to gain a better understanding of how conditions in early life, either pre- or post-natally can affect life-long health.

2. The protein content of infant formulas has traditionally been much higher than that of breast milk because cow's milk protein is not used as efficiently as human milk protein and there was previously more concern over the adverse effects of insufficient protein. The protein content of formulas has been falling as new evidence has suggested that higher intakes are unnecessary.

3. **Diary date to note:** Results from the EC-funded Early Nutrition Programming Project (EARNEST) will be presented at **The Power of Programming** international conference 6/8 May 2010 in Munich. For more information log on to <http://www.metabolic-programming.org>.

THE POWER OF PROGRAMMING
International Conference on Developmental
Origins of Health and Disease

Munich, Germany 6th - 8th May, 2010

The poster features a background image of a Munich cityscape with snow-capped mountains in the distance. It includes three logos: a globe with 'DOHaD' (Developmental Origins of Health and Disease), a teddy bear with 'EARNEST' (Early Nutrition Programming Project), and a circular logo for the 'EARLY NUTRITION PROGRAMMING PROJECT'.