Feeding in the first year of life and risk for overweight and obesity

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Abstract (300 word limit)

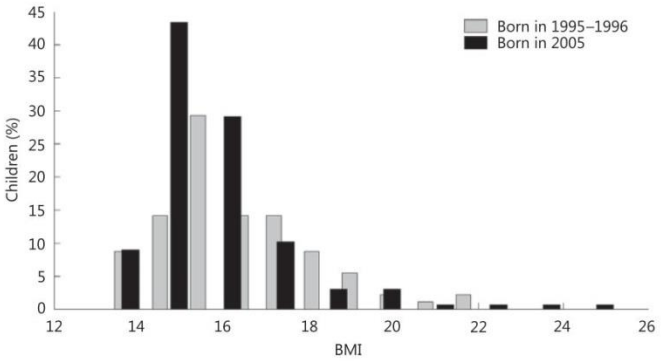
Influences early in life have been observed to program body weight and the risk for developing obesity. Infant feeding has been associated with later BMI measures. High weight gain in infancy has also been associated with later overweight. We investigated infant diet and growth in two nation-wide cohorts (born 1995-96 and 10 years later 2005) through the first year of life and with a follow-up at the age of six years. Recommendations about infant diet were changed in early 2000. Comparison between the cohorts showed lower prevalence of overweight in the latter cohort, which could be attributed to a changed diet and e.g. lower protein intake. In a randomized controlled trial comparing infants exclusively breastfed for 4 vs 6 months, we did not observe a difference in growth between the groups, which was explained by small difference in intake between the two groups. According to several systematic literature reviews there is strong evidence for a protective effect of breastfeeding against overweight and obesity in childhood and adolescence. Furthermore, higher protein intake in infancy and early childhood is convincingly associated with increased growth and higher BMI in childhood. Protein intake between 15 E% and 20 E% in early childhood has been associated with an increased risk of being overweight later in life. Breastmilk is the optimal infant diet and offical recommendations world-wide have followed the WHO‘s recommendation on exclusive breastfeeding for the infant‘s first six months, and continued breastfeeding parallell to giving other food until one or two year of age or as long as it suits the family. Increased knowledge has strengthened the evidence for this recommendation but more studies are needed. Beside further studies on infant feeding and later obesity, investigations on early nutrition and e.g. astma and ADHD are needed.

Biography (150 word limit)



Inga Thorsdottir is professor of human nutrition, Faculty of Food Science and Nutrition, School of Health Sciences, University of Iceland. She is currently dean of the SHS UI. She has co-ordinated many research projects and supervised doctoral students. Thorsdottir built up the Unit for Nutrition Research in the nineties and until she started in her present position 2012. Thorsdottir has received many honors for her pioneer and scientific work. She has been involved in nutrition recommendations since the nineties.

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Distribution of BMI of 6-year-old children in the 1995–96 and 2005 cohorts. Cut-off points of 17.55 and 17.34 for overweight and 19.78 and 19.65 for obesity were applied for boys and girls, respectively

Recent Publications

1. Gunnarsdottir I, Schack-Nielsen L, Michaelsen KF, Sørensen TIA, Thorsdottir I (2010) Infant weight gain, duration of exclusive breast-feeding and childhood BMI – two similar follow-up cohorts. Public Health Nutrition 13:201-207.

2. Imai CM, Gunnarsdottir I, Thorisdottir B, Halldorsson TI, Thorsdottir I (2014) Associations between Infant Feeding Practice Prior to Six Months and Body Mass Index at Six Years of Age. Nutrients 6:1608-1617

3. Gunnarsdottir I, Thorsdottir I (2003) Relationship between growth and feeding in infancy and body mass index at the age of 6 years. Int J Obes Relat Metab Disord 27:1523-1527.

4. Thorisdottir B, Gunnarsdottir I, Thorisdottir AV, Palsson GI, Halldorsson TI, Thorsdottir I (2013) Nutrient Intake in Infancy and Body Mass Index at Six Years in Two Population-Based Cohorts Recruited before and after Revision of Infant. Ann Nutr Metab 63:145–151.

5. Thorisdottir B, Gunnarsdottir I, Palsson GI, Halldorsson TI, Thorsdottir I (2014) Animal protein intake at 12 months is associated with growth factors at the age of six. ACTA PAEDIATRICA 103:512-517

6. Hörnell A, Lagström H, Lande B, Thorsdottir I (2013) Breastfeeding, introduction of other foods and effects on health: a systematic literature review for the 5th Nordic Nutrition Recommendations.Food & nutrition research 57 (1), 20823

7. Hörnell A, Lagström H, Lande B, Thorsdottir I (2013) Protein intake from 0 to 18 years of age and its relation to health: a systematic literature review for the 5th Nordic Nutrition Recommendations. Food & nutrition research 57 (1), 21083

8. Jonsdottir OH; Kleinman RE; Wells JC; Fewtrell MS; Hibberd PL; Gunnlaugsson G; Thorsdottir I (2014) Exclusive breastfeeding for 4 *vs*. 6 months and growth in early childhood. ACTA PAEDIATRICA 103:105–111

9. Wells JCK, Jonsdottir OH, Hibberd PL, Fewtrell MS, Thorsdottir I, Eaton S, Lucas A, Gunnlaugsson G, and Kleinman ER (2012) Randomized controlled trial of 4 compared with 6 mo of exclusive breastfeeding in Iceland: differences in breast-milk. Am J Clin Nutr 96:73–79.