Maternal obesity and offspring dietary patterns at 9 months of age

Background/Objectives: Differences in the quality of complementary feeding between infants of obese and nonobese mothers have not been examined sufficiently. The aim of this paper was to compare dietary patterns, foods, nutrients and energy intakes of 9-month-old Danish infants in a cohort comprising obese mothers (SKOT II, n=184; SKOT, Danish abbreviation of small children's diet and well-being) with a cohort consisting mainly of nonobese mothers (SKOT I, n=329). Subjects/Methods: Dietary intake was assessed by 7-day records, and dietary patterns were identified by principal component analysis.

Results: SKOT I was characterized by a lower maternal body mass index (BMI) and a higher social class than SKOT II in relation to parental education and occupation. Infants in SKOT II had lower scores on a Health-Conscious Food pattern reflected at the food group level, for example, with lower intake of the food groups Fruit and Vegetable but higher intake of WheatBreadNoWholegrain in SKOT II compared with SKOT I. Moreover, SKOT II had shorter durations of breastfeeding, earlier introductions of complementary feeding, higher energy intake from protein but lower energy intakes from monounsaturated fatty acids and polyunsaturated fatty acids at 9 months. SKOT II had higher weight-for-age and length-for-age z-scores, but no differences in BMI z-scores, as compared with SKOT I at 9 months.

Conclusions: Infants of obese mothers from a lower social class seem to have a less healthy diet and higher weight and length z-scores at 9 months. Therefore, the promotion of healthy complementary feeding might be beneficial for the prevention of health implications, such as obesity, later in life for these infants. European Journal of Clinical Nutrition advance online publication, 3 December 2014; doi:10.1038/ejcn.2014.258.