Predictors of overweight during childhood in offspring of parents with type 1 diabetes.

OBJECTIVE: To study which perinatal factors affect the risk of childhood overweight in offspring with a first-degree relative (FDR) with type 1 diabetes and to determine whether maternal diabetes is an independent contributor to overweight risk.

RESEARCH DESIGN AND METHODS: Data on a child's weight and height were collected at age 2, 5, and 8 years from 1,214 children participating in the prospective BABYDIAB study. All children had an FDR with type 1 diabetes, including 783 whose mothers had type 1 diabetes. Overweight was defined as BMI percentile $\geq 90$. Data on birth size, breast-feeding, maternal age, and smoking during pregnancy were collected by questionnaires. Risk estimates were calculated by logistic regression analyses. RESULTS: Breastfeeding duration and birth size both contributed significantly to overweight risk at all age intervals. Full breast-feeding $>4$ months or any breast-feeding $>6$ months reduced risk of overweight (aged 8 years: odds ratio 0.3 [95% CI 0.2-0.7], $P = 0.004$; and 0.3 [0.1-0.6], $P = 0.001$). Large-for-gestational-age status increased risk of overweight (aged 8 years: 2.4 [1.4-4.3], $P = 0.002$). Importantly, no evidence was found for an independent contribution of maternal type 1 diabetes to childhood overweight. CONCLUSIONS: Our findings indicate that maternal type 1 diabetes is not an independent risk factor for overweight during childhood in offspring of type 1 diabetic mothers.
but that factors associated with maternal type 1 diabetes, such as short breast-feeding duration and high birth size, predispose children to overweight during childhood.