Impact of early feeding on childhood eczema: development after nutritional intervention compared with the natural course - the GINIplus study up to the age of 6 years.

BACKGROUND: Nutritional intervention with hydrolysed infant formulas has been shown efficacious in preventing eczema in children predisposed to allergy. However, this preventive effect has never been related to the natural course of eczema in children with or without a family history of allergy. The aim of this study therefore was to compare the course of eczema in predisposed children after nutritional intervention to the natural course of eczema.

METHOD: The prospective German birth cohort study GINIplus includes a total of 5991 children, subdivided into interventional and non-interventional groups. Children with a familial predisposition for allergy whose parents agreed to participate in the prospective, double-blind intervention trial (N=2252) were randomly assigned at birth to one of four formulas: partially or extensively hydrolysed whey, extensively hydrolysed casein (eHF-C) or standard cow's milk formula. Children with or without familial predisposition represented the non-interventional group (N=3739). Follow-up data were taken from yearly self-administered questionnaires from 1 up to 6 years. The outcome was physician-diagnosed eczema and its symptoms. The cumulative incidence of eczema in predisposed children
with or without nutritional intervention was compared with that of non-predisposed children who did not receive intervention. Cox regression was used to adjust for confounding. RESULTS: Predisposed children without nutritional intervention had a 2.1 times higher risk for eczema [95% confidence interval (CI) 1.6-2.7] than children without a familial predisposition. The risk was smaller with nutritional intervention even levelling out to 1.3 (95% CI 0.9-1.9) in children fed eHF-C formula. CONCLUSION: Although direct comparability is somewhat restricted, the data demonstrate that early intervention with hydrolysed infant formulas can substantially compensate up until the age of 6 years for an enhanced risk of childhood eczema due to familial predisposition to allergy.