Certain hydrolyzed formulas reduce the incidence of atopic dermatitis but not that of asthma: Three-year results of the German Infant Nutritional Intervention Study.

BACKGROUND: Recommendations for primary prevention of allergic diseases in high-risk children include feeding with hydrolyzed formulas if breast-feeding is insufficient. OBJECTIVE: The primary objective of the German Infant Nutritional Intervention study was to investigate the allergy preventive effect of 3 hydrolyzed formulas compared with cow's milk formula in the first 3 years of life in a randomized, double-blind trial. METHODS: Between 1995 and 1998, 2252 newborns with atopic heredity were allocated to a group receiving cow's milk formula, partially or extensively hydrolyzed whey formula, or extensively hydrolyzed casein formula as a milk substitute for the first 4 months if breast-feeding was insufficient. Main outcome parameters were allergic manifestations, atopic dermatitis (AD), and asthma. RESULTS: After 3 years, 396 of 2252 children (17.6%) had dropped out. Breast-fed infants without formula feeding during the intervention (n = 889) were considered separately. A significant reduction of the incidence of AD was achieved with the extensively hydrolyzed casein formula in the intention-to-treat (ITT; n = 1363) and per protocol (PP; n = 904) analyses (ITT: population odds ratio [95% CI], 0.67 [0.45-0.99]; PP:
adjusted odds ratio [OR(adj)], 0.53 [0.32-0.88]), and with the partially hydrolyzed whey formula in the PP analysis (ITT: population odds ratio, 0.76 [0.52-1.11]; PP:OR(adj), 0.60 [0.37-0.97]). None of the formulas reduced the incidence of asthma. CONCLUSION: The risk for AD, but not for asthma, can be reduced with certain cow's milk hydrolyzates in high-risk infants when breast-feeding is insufficient. CLINICAL IMPLICATIONS: Early nutritional intervention in high-risk children has significant influence on the incidence of AD, but not of asthma.