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Title: The effect of breastfeeding on development of sensitization in preschool children

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Body: Background: Mothers of children with a predisposition to atopic diseases are generally recommended extended breastfeed. However, recent studies indicate that long duration of breastfeeding increases the risk atopic dermatitis and the evidence for a protective effect on sensitization remains elusive. Objective: The aim of this study was to investigate the effects of the duration of exclusive and total breastfeeding on the development of sensitization in preschool children. Method: 411 children were included from the Copenhagen Prospective Study of Asthma in Childhood (COPSAC2000) birth cohort born of mothers with a history of asthma. SPT and sIgE were simultaneously measured when the children were 6mo, 18mo, 4yrs and 6yrs old against 22 specific allergens. Allergic sensitization was defined as a SPT with a wheal size ≥ 2 mm at young age (6 and 18 months) and ≥ 3 mm at age 4 and 6 years or sIgE $\geq 0,35$ IU/mL. Information on breastfeeding was gathered by interview at the clinic when the children were 12 months old. Results: Neither breastfeeding exclusively for more than 4 months or 6 months showed any significant difference with regards to development of allergic sensitization in the children. Partial breastfeeding for more than 4 months compared to less than 4 months did not affect the development of sensitization either. Sub-analyses of food sensitization and sensitization to milk and egg alone was not associated with breastfeeding either. Conclusion: Breastfeeding does not affect the risk of sensitization in high-risk children.