# The significance of early mono- and poly-sensitization on the development of rhinoconjunctivitis in childhood

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## Abstract

**Background**: Rhinoconjunctivitis is one of the most common chronic diseases amongst children and presents a substantial burden on both an individual level and to society in general. The aim of this project was to investigate the significance of early mono- and poly-sensitization before/at 18 months of age on the development of rhinoconjunctivitis in adolescence.

**Methods**: The data used in this project originates from a longitudinal non-interventional prospective birth cohort study, the DARC Cohort, in which 372 children were examined 8 times from birth to 14 years of age. Examinations included questionnaire-based interviews, clinical examinations by a doctor, skin prick test (SPT), and specific IgE (s-IgE).

**Results**: Follow-up rate at the 14-year examination was 66.2%, where there was found a prevalence of rhinoconjunctivitis of 32.8% at 14 years of age, of which 70.5% were sensitized as infants. A significantly higher risk (aOR 1.36, 95%CI: 1.08-1.82) of rhinoconjunctivitis at 14 years of age was found in children, who were poly-sensitized before/at 18 months compared to those, who were non-sensitized. A higher risk of rhinoconjunctivitis was found in children, who were only mono-sensitized at/before 18 months (aOR 1.72, 95%CI: 0.97-3.03), but this was not statistically significant.

**Conclusion**: A positive and significant association between early poly-sensitization in infants and the development of rhinoconjunctivitis in adolescence was discovered within this study population. Although a higher rate of mono-sensitized infants developed rhinoconjunctivitis in adolescence compared to non-sensitized, this was found not to be significant.

**Keywords**: rhinoconjunctivitis; rhinitis; atopic diseases; sensitization; specific IgE