

**Publication****Clinical markers of asthma and IgE assessed in parents before conception predict asthma and hayfever in the offspring****JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)****ID** 3829015**Author(s)** Bertelsen, R. J.; Rava, M.; Carsin, A. E.; Accordini, S.; Benediksdóttir, B.; Dratva, J.; Franklin, K. A.; Heinrich, J.; Holm, M.; Janson, C.; Johannessen, A.; Jarvis, D. L.; Jogi, R.; Leynaert, B.; Norback, D.; Omenaas, E. R.; Raheison, C.; Sánchez-Ramos, J. L.; Schlünssen, V.; Sigsgaard, T.; Dharmage, S. C.; Svanes, C.**Author(s) at UniBasel** [Dratva, Julia](#) ;**Year** 2017**Title** Clinical markers of asthma and IgE assessed in parents before conception predict asthma and hayfever in the offspring**Journal** Clinical & Experimental Allergy**Volume** 47**Number** 5**Pages / Article-Number** 627-638

Mice models suggest epigenetic inheritance induced by parental allergic disease activity. However, we know little of how parental disease activity before conception influences offspring's asthma and allergy in humans.; We aimed to assess the associations of parental asthma severity, bronchial hyperresponsiveness (BHR), and total and specific IgEs, measured before conception vs. after birth, with offspring asthma and hayfever.; The study included 4293 participants (mean age 34, 47% men) from the European Community Respiratory Health Survey (ECRHS) with information on asthma symptom severity, BHR, total and specific IgEs from 1991 to 1993, and data on 9100 offspring born 1972-2012. Adjusted relative risk ratios (aRRR) for associations of parental clinical outcome with offspring allergic disease were estimated with multinomial logistic regressions.; Offspring asthma with hayfever was more strongly associated with parental BHR and specific IgE measured before conception than after birth [BHR: aRRR = 2.96 (95% CI: 1.92, 4.57) and 1.40 (1.03, 1.91), respectively; specific IgEs: 3.08 (2.13, 4.45) and 1.83 (1.45, 2.31), respectively]. This was confirmed in a sensitivity analysis of a subgroup of offspring aged 11-22 years with information on parental disease activity both before and after birth.; Parental BHR and specific IgE were associated with offspring asthma and hayfever, with the strongest associations observed with clinical assessment before conception as compared to after birth of the child. If the hypothesis is confirmed in other studies, parental disease activity assessed before conception may prove useful for identifying children at risk for developing asthma with hayfever.

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