The Importance of Family History in Asthma During the First 27 Years of Life

Paaso EM, Jaakkola MS, Lajunen TK, Hugg TT, Jaakkola JJ. *Am J Respir Crit Care Med*. 2013;188(5):624–626

**PURPOSE OF THE STUDY.** The goal of this study was to evaluate the risk of a child developing asthma if 1 or both parents has asthma.

**METHODS.** A random sample of 1,623 children was followed up over 20 years. The outcome of interest was physician-diagnosed asthma in parents or children determined by telephone interview at baseline and follow-up surveys.

**RESULTS.** If either of the parents had asthma, the risk of the child developing asthma was significantly increased throughout the study period: the maternal asthma hazard ratio (HR) was 1.91 (95% confidence interval [CI]: 1.36–2.69), and the paternal asthma HR was 2.01 (95% CI: 1.37–2.96). The risk was higher still if both parents had asthma (HR: 3.83 [95% CI: 2.03–7.24]). Siblings conveyed a strong independent risk for the study subject to develop asthma (HR: 2.33 [95% CI: 1.73–3.14]). This risk was even higher when more than one-half of the subject’s siblings had asthma, indicating a dose–response pattern (HR: 2.92 [95% CI: 1.94–4.41]).

**CONCLUSIONS.** The results underline the usefulness of asking about asthma in siblings in addition to parental asthma in clinical practice.

**REVIEWER COMMENTS.** We have long known that asthma runs in families. This study helps clarify the risk. If both parents have asthma, the child’s risk of developing asthma is greater than if only 1 parent has asthma, and, furthermore, this risk of developing asthma continues into adolescence and young adulthood. Having siblings with asthma also increases the risk even if neither parent has asthma.

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The Relationship Between a Specific IgE Level and Asthma Outcomes: Results From the 2005–2006 National Health and Nutrition Examination Survey


**PURPOSE OF THE STUDY.** The goal of this study was to examine the relationship between specific IgE (sIgE) to indoor allergens and asthma outcomes as defined according to emergency department (ED) visits and wheeze.

**STUDY POPULATION.** Subjects included all participants in the 2005–2006 National Health and Nutrition Examination Survey who reported having current asthma. There were 351 children <17 years of age and 390 adults.

**METHODS.** Total and sIgE levels to 19 allergens were obtained on survey participants in the 2005–2006 National Health and Nutrition Examination Survey cycle, including 4 food allergens, 6 outdoor aeroallergens, and 9 indoor aeroallergens. Outcomes included a positive report of wheezing and reporting a visit to the ED or urgent care center because of asthma in the past 12 months. Predicted probability plots were obtained by using logistic regression for allergens, with a significant relationship between continuous IgE and ED visits.

**RESULTS.** Among the survey participants with current asthma, 60% of children and 56% of adults were sensitized to at least 1 indoor allergen. In children, 69% reported wheeze, and 28% had at least 1 ED visit in the previous year. In adults, 73% had wheeze and 26% had an asthma ED visit in the past year. In children, sensitization to both cockroach and rat allergens was strongly associated with asthma ED visits (odds ratios of 5.0 and 8.8 for the dichotomous and continuous models, respectively). Molds were associated with wheeze and ED visits in the continuous model only. In adults, sensitization to house dust mite and cat were positively associated with ED visits in the dichotomous model, but only house dust mite sensitization maintained significance in the continuous model. Furthermore, the probability of an asthma ED visit increased significantly as sIgE levels to rat, cockroach, and *Aspergillus* increased in children and sIgE levels to house dust mites increased in adults.

**CONCLUSIONS.** This study found that sensitization to a particular indoor allergen is a risk factor for wheeze and asthma ED visits regardless of exposure data. It also shows a dose–response relationship between the sIgE level and the risk of wheeze or ED visits.

**REVIEWER COMMENTS.** This study confirms the association between sensitization to indoor aeroallergens and increased asthma morbidity and health care utilization. However, the dose–response relationship between sIgE level and asthma outcomes has not been reported by others. If confirmed, these findings would highlight the importance of testing for specific allergen sensitization in the management of asthma and also to advocate for targeted environmental control measures in the home.

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The Obesity-Asthma Link in Different Ages and the Role of Body Mass Index in its Investigation: Findings From the Genesis and Healthy Growth Studies


**PURPOSE OF THE STUDY.** The goal of this study was to investigate the association of pediatric adiposity and asthma among different age groups.
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