the main limitation of this study results from the use of questionnaires and reliance on the retrospective recall of parents for data collection. Exposure to tobacco smoking was assessed through questionnaire responses and not validated by more objective measurements such as cotinine levels. The study lacks information on the actual duration and intensity of exposure to tobacco smoke, because children and parents may have altered their time-activity pattern to avoid exposure to tobacco smoke. The study also lacks information on confounding factors such as maternal nutritional status and alcohol or other toxic substance intake during pregnancy. Although one could also argue that questionnaire data collections are prone to errors in reporting, given the stigma associated with smoking, parents are more likely to underreport and bias the data toward the null hypothesis.

**Results**

Six percent of children in the survey were reported by their parents to have doctor-diagnosed asthma. The prevalence of asthma was higher among boys (6.7%) than girls (5.1%) and among black children (8.9%) compared with white children (5.2%). Risk factors for doctor-diagnosed asthma included a family history of atopy (odds ratio [OR]: 2.2), child’s history of allergy to a pet (OR: 24.2), exposure to environmental tobacco smoke (OR: 1.8), use of gas stove or oven for heat (OR: 1.8), and the presence of a dog in the household (OR: 1.6). The population attributable risk of ≥1 residential exposure for doctor-diagnosed asthma in US children <6 years old was 39.2%, or an estimated 533,000 cases, and children with a positive family history of atopy accounted for 300,000. The attributable cost of asthma as a result of these residential exposures for children <6 years old was $402 million annually.

**Conclusion**

The elimination these identified residential risk factors could result in a 39% decline in doctor-diagnosed asthma in US children <6 years old.

**Reviewer's Comments**

There has been a dramatic increase in asthma prevalence in the past 20 to 30 years. Although many factors certainly contributed to this increase, this study suggests that specific exposures in the homes of our patients may play a major role. Please note also that the presence of a dog in this study has a deleterious effect, contrary to the finding in the next study. The answer to the question of indoor pets is still far from clear,
Environmental Tobacco Smoke Exposure During Childhood is Associated with Increased Prevalence of Asthma in Adults
Mary Beth Bollinger
Pediatrics 2002;110:446

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