(NO₃) were estimated by using measurements of these pollutants at 940 locations in the studied communities over a 2-week period.

RESULTS. Among children in high-stress households (perceived stress scale >4), flow in the large airways (forced expiratory volume 1 [FEV1]) decreased by 4.5% and 2.8% for each 21.8 ppb increase in NOX at homes and schools, respectively. Pollutant effects were significantly larger in the high-stress households compared with lower-stress households (P = .007 for residential NOX, P = .05 for school NOX). Similar results were observed for lung function volume (forced vital capacity [FVC]). These associations remained after adjustment for sociodemographic factors and in an analysis restricted to children who do not have asthma.

CONCLUSIONS. Results suggest that a high-stress environment in the home, as determined by parental perceived stress, is associated with increased susceptibility to lung function effects of air pollution at home and school.

REVIEWER COMMENTS. Evidence has shown an association between exposure to air pollution and an increase in asthma prevalence, exacerbation rate, and lung function deficits. Additionally, psychosocial stress is associated with increased endogenous steroid production, leading to steroid resistance and diminished anti-inflammatory effect of cortisol. This study examined the detrimental effects of both, with results suggesting that children with high psychosocial stress in the home are more susceptible to the known health effects caused by air pollution. Furthermore, this study evaluated patients both with and without asthma, and showed consistent results in all children with traffic-related air pollution exposure. Those whose parents reported a stressful life during the child’s early school age experienced damaging effects in both FVC and FEV1. Further studies with longitudinal measurement of parental stress, personal stress, and lung function measurement are needed to evaluate this possible association.

FOOD ALLERGY

The Prevalence, Severity, and Distribution of Childhood Food Allergy in the United States

PURPOSE OF THE STUDY. The purpose of this study was to estimate the overall prevalence of childhood food allergy, and the severity of food-related allergic reactions in the United States.
The Respiratory Health Effects of Nitrogen Dioxide in Children With Asthma
Katherine Larabee and Wanda Phipatanakul
Pediatrics 2012;130;S10
DOI: 10.1542/peds.2012-2183M

The online version of this article, along with updated information and services, is located on the World Wide Web at:
/content/130/Supplement_1/S10.1.full.html