Cincinnati Childhood Allergy and Air Pollution Study

EFFECTS OF ETS AND OTHER INDOOR HOUSEHOLD EXPOSURES ON THE UPPER RESPIRATORY HEALTH OF INFANTS

J Biagini, G LeMasters, L Levin, T Reponen, J Locke and P Ryan. University of Cincinnati, Cincinnati, OH 45267

UPATED ABSTRACT

Introduction: Many studies have found associations between environmental tobacco smoke (ETS) and indoor exposures such as mold and childhood asthma, but studies on combined indoor exposures on children’s upper respiratory symptoms (URS) and upper respiratory infections (URIs) are few. This study examined infants’ risk for developing URS or URI in relation to mold, ETS and pet exposures.

METHODS

- Eligible infants (n=332) were identified by birth records and had one parent that was atopic by positive skin prick test (SPT). Exposure information was collected at the time of parent SPT.
- All infants were under 18 months of age.
- Parents were asked to complete monthly diaries related to their infants’ exposures.

RESULTS

- Many studies have found associations between ETS, cats, dogs, siblings and daycare attendance.
- Various studies have found associations with nasal congestion, runny nose, rhinitis, allergic rhinitis and dry or sore throat.

OUTCOME AND EXPOSURE DEFINITIONS

Outcomes Definitions:
- Sinus Infections, Ear Infections and Rhinitis: Any parent report of symptoms
- Allergic Rhinitis: Parental report of at least one symptom on 1-19 cigarettes/day or more

Exposure Definitions:
- ETS: sum of # of cigarettes each smoker reports smoking, 1-19 cigarettes, >20 cigarettes/day
- Cat Ownership: yes/no
- Dog Ownership: yes/no
- Daycare Attendance: parent report

LIMITATIONS

- Exposures are self reported.
- Potential non-response bias (monthly diaries returned).

CONCLUSIONS

- Mold exposure increases the risk of rhinitis and allergic rhinitis.
- Exposure to dog decreases the risk of sinus infections. No effect was observed with cat.
- Having 2 siblings increases the risk of sinus infections, but decreases the risk of allergic rhinitis, supporting the ‘sibling effect’.

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