

# Fresh Air



VOLUME 5

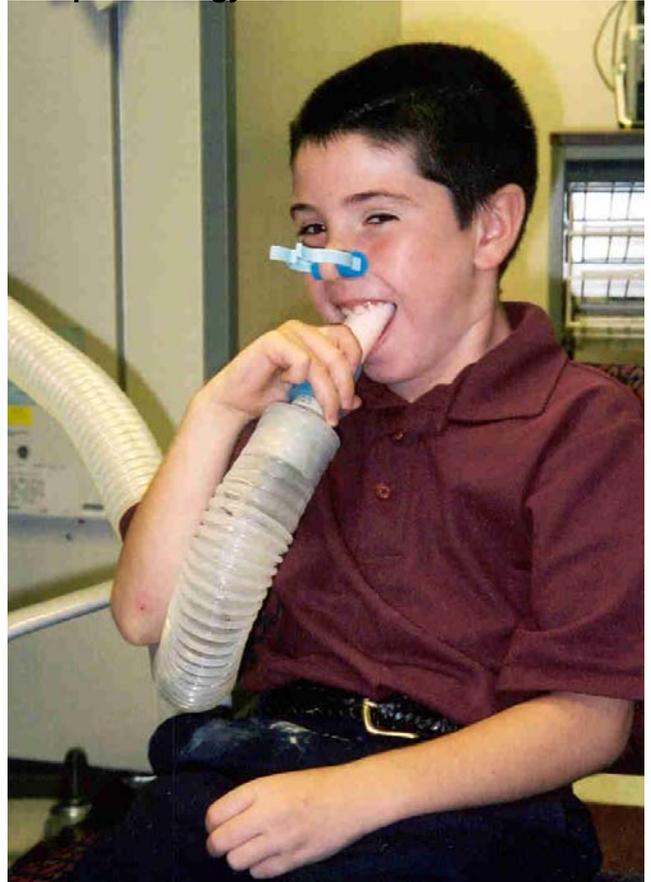
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**W**e would like to thank you for your continued participation in the Epidemiology of Home Allergens and Asthma Study. We really appreciate every moment that you spend talking to us and taking the time out of your busy day to share information about your child's health and development. After the difficult world events of the past eight months, we are even more determined to affirm life and continue our work with you to find ways of protecting children's health.

In this fifth issue of our newsletter, "Fresh Air," we bring you up-to-date on newly published results from our study. If you have questions as you read through the newsletter, do not hesitate to contact us at (617) 525-0957.

All the children whose health and growth have been followed since birth will have turned six years old by July, 2002! With your continued enthusiastic participation, we are beginning to understand factors that may reduce or raise the risk, not only of respiratory illness in infancy, but also of allergy, wheeze, and asthma in the early school years. United States health policy makers and scientists at the National Institutes of Health look to results of the few studies such as ours for guidance regarding policy and funding for efforts aimed at reducing asthma rates and asthma severity.

## The Epidemiology of



**TESTING, ONE, TWO, THREE: Michael Mollins tests his lung function at the Children's Hospital Lung Function Clinic.**

## Join us at the Children's Hospital Lung Function Clinic!

When children are six or seven years old, the evaluation for allergies and the diagnosis of asthma can be made with more certainty. We will offer your child free allergy testing when they are that age. We will also offer your child a breathing test to measure his or her lung function and to test for airway sensitivity. We will make the results of these tests available to you and will be happy to discuss them with you and your doctors. Because all children coming to the clinic have a family history of allergy or asthma, many parents are interested to see whether these family traits have been passed on.

*Brothers and sisters are welcome! We show children's videos during the allergy testing and have surprise gifts from the treasure chest for everyone! Parents, you can ask questions about asthma and allergy while we entertain their children!*

Before the clinic visit, we will also offer a home visit to measure existing allergens in your household and to look for high levels of allergens to which household members are allergic. We look forward to meeting you and your children and to answering your questions at that visit.



Menucha Zuber smiles while she gets her skin test done.

## Questions Parents Ask at the Clinic Visit

### What is my child allergic to? What allergy tests are you doing?

Working hand-in-hand with the Children's Hospital Allergy Division, we test for allergy to dust mite, cat, dog, mouse, cockroach allergen, mixed trees (oak, birch, and maple), ragweed, mixed grasses, and molds (*Aspergillus*, *Penicillium*, *Alternaria*, and *Cladosporium*). Brothers and sisters who were age five or younger when this study started can also be tested. We use the safest screening allergy test; no serious side effects have occurred in thousands of tests. You go home with a photocopy of the skin test results to keep for your records or to show, if you wish, to your child's pediatrician.

### My child has night-time cough. Does she have asthma?

The tests at the clinic will determine whether your child has sensitive/reactive airways or allergies. This information may be helpful to your pediatrician or pediatric allergist. If you have a question about your child's health, please always call your regular doctor who knows your

child from a patient-care point-of-view.

### My child is well. What is the purpose of the visit to the Children's Hospital Lung Function Lab?

Some children do not have asthma, yet have positive allergy tests or airways sensitivity. *They have been protected from expression of disease*, despite the fact that allergy and airways sensitivity increase asthma risk. Some children do not

have asthma, *or* allergic disease, *or* positive allergy tests, *or* airways sensitivity. *They have been protected from expression of disease*, despite the fact that their family history increases their risk of asthma or allergy. Doing these measurements will help us discover whether the *environment that your children grew up in has protected them from getting allergy (positive skin tests), airway sensitivity, or asthma.*

### My sister has bad allergies in the spring but no asthma; my brother has asthma; I don't have either. Why are we different?

A combination of genetics (inheritance) and differing environmental exposures led to these differences. You and your family are helping us to sort out the factors that matter in the development of asthma and allergy.

### How long will the study last?

The teen years are very important times when asthma and allergy risks change,

depending on whether your child is a boy or a girl. This is why we hope to keep in touch with you as your child grows and eventually enters the preteen and teen years. We will contact you less frequently after your child turns seven.

### Can I have a summary of what is known about indoor air, asthma, and the effectiveness of different strategies to reduce exposure to indoor allergens in allergic asthmatic children?

The book "Clearing the Air: Asthma and Indoor Air Exposures," is now available in hardback or on the Web at <http://books.nap.edu/catalog/9610.html>. Dr. Gold participated in the Institute of Medicine committee that wrote the book, reviewing results from asthma studies throughout the world, including papers from our Epidemiology of Home Allergens and Asthma Study. We also offer other educational material in both English and Spanish.



Robert (left) and Michael Mollins show us their new squeeze toys while waiting to see if they have allergies.

## Newly Published Results

### ● The role of indoor allergen sensitization and exposure in causing morbidity.

Lewis *et al.* Am J Resp Crit Care Med 2002;165:961-966.

If you are asthmatic and want to change your home environment to reduce your asthma symptoms, it helps to know what you are allergic to. Asthmatic women who were allergic to cats and who had high levels of cat dander in their homes were more likely to have wheezed without a cold and to have used inhaled steroids. Asthmatic women who were allergic to cockroaches and who had high levels of cockroach allergen in their homes were more likely to have visited the emergency room for wheeze and to have used inhaled steroids.

### ● Day care, respiratory infections, wheezing, asthma, and total serum IgE level in early childhood.

Celedon *et al.* Arch Pediatr Adol Med 2002;156:241-245.

While day care attendance is associated with wheeze in infancy, it may protect children against the development of al-

lergy and wheezing in later childhood.

### ● Association of specific allergen sensitization with socioeconomic factors and allergic disease in a population of Boston women.

Lewis *et al.* J Allergy Clin Immunol 2001;107:615-622.

Mothers from our study had more allergies and higher asthma rates if they lived



Tyler Myrick tests his lung capacity at the Children's Hospital Pulmonary Function Lab.

in communities with fewer resources and greater poverty.

### ● Parental stress as a predictor of wheezing in infancy: A prospective birth-cohort study.

Wright *et al.* Am J Respir Crit Care Med 2002;165:358-365.

Greater levels of parental stress may increase the risk of wheeze in their infants. Preliminary data suggest that early-life parental stress may also increase the risk of wheeze that persists into childhood.

### ● House dust endotoxin and wheeze in the first year of life.

Park *et al.* Am J Respir Crit Care Med 2001;163:322-328.

Children whose houses contained elevated levels

of bacterial endotoxins in the family room had an increased risk of wheeze in the first year of life. Potential indoor sources of endotoxins include dogs and dampness in the home. While endotoxin may increase the risk of wheeze in infancy, some researchers believe it may, like day care, protect certain children from the development of allergy in later childhood. We are currently investigating that possibility.

### ● Exposure to cockroach allergen in the home is associated with incident doctor-diagnosed asthma and recurrent wheezing.

Litonjua *et al.* J Allergy Clin Immunol 2001;107:41-47.

Cockroach allergen in the home predicted the development of asthma and recurrent wheezing among children in our study.

You may obtain copies of these articles from the journal

or by calling your research assistants at (617) 525-0957.



Meghan Salgia watches a movie while she waits for the results of her allergy skin test.

## Upcoming Article Topics

STAY TUNED!

- **Bottle feeding** at bedtime in the first year of life and wheezing and asthma in the first five years of life.
- **Antibiotic use** in the first year of life is not associated with asthma, allergic rhinitis, or eczema by age 5 years.
- **Cat exposure in infancy:** Is it protective or a risk factor for wheeze?



**MEET THE ALL-STAR TEAM: Sarah (left), Madeline (center), and Jonathan.**

**Feel free to call your research assistants with questions or for more information:**

Jonathan Hausmann (617) 525-0957.

Sarah May (617) 525-0963.

Madeline Reilly (617) 525-0962.

## Meet the Research Team!

Our health-effects research assistants thank you again for your continued dedication to this public health project. We have several new members of our team. Madeline Reilly enrolled in a Health Careers program at the Harvard Extension School after studying French at Holy Cross. She loves working with children and clinical care, and will combine these two interests by enrolling in a pediatric nurse practitioner program after working on this study. Jonathan Hausmann, a biology graduate from Amherst College (he wrote a thesis on pipefish, relatives of sea horses), loves medicine, teaching, and playing with children. Sarah May graduated in biology from Hamilton College and has a strong interest in genetic counseling and pediatrics. All of our research assistants appreciate your taking the time to share information about your child's health and development and look forward to meeting you in the coming years!



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