

# IEQ NEWS



*We care about indoor air*

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Indoor Environmental Quality

Issue #5

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## What's New?

New DPH web address:  
<http://www.ct.gov/dph>

Energy Star Indoor Air Package  
<http://www.energystar.gov/homes.iap>

## Upcoming Events:

**October is National Home Indoor Air Quality Action & Awareness Month**

[http://www.montana.edu/wwwcxair/oct\\_month.htm](http://www.montana.edu/wwwcxair/oct_month.htm)

**October 26**

CPHA Annual Meeting, Southington  
<http://www.cpha.info>

**November 2**

CEHA Annual Meeting, New Haven  
<http://www.cteha.org>

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## FOCUS: Indoor Allergens

There are many types of contaminants that impact health and the indoor environment. Allergens are one type of contaminant and will be the focus of this issue.

### What are allergens?

Allergens are biological or chemical substances that are foreign to the body and trigger the immune system to react defensively, producing an allergic reaction. The majority are biological.

### How are you exposed to indoor allergens?

The most common exposure route to indoor allergens is inhalation. Allergens are particles of varied sizes. Most allergens are particles small enough to stay suspended in the air, and can be inhaled into the lungs. These particles can also be ingested, or can come in contact with the skin and eyes and become an irritant.

### What can I do to reduce my exposure to indoor allergens?

The best way is to control the source of the allergen:

- Control dust mites by reducing clutter; vacuuming once or twice a week with a HEPA vacuum; washing bed linens in hot water weekly.
- Reduce animal dander by keeping pets out of the bedroom; bathing pets weekly.
- Prevent entry of pollen by keeping windows and doors closed (spring/fall).
- Avoid mold spores by repairing water leaks promptly; discarding any moldy furnishings; keeping humidity levels below 60%.
- Control cockroaches and other pests by cleaning kitchen and baths thoroughly; using airtight food storage; eating only in the kitchen.
- Control infectious diseases by washing hands regularly; avoiding people with colds or the flu.

### Common Biological Indoor Allergens

- Dust mites
- Pet dander
- Mold
- Bacteria
- Insects & rodent droppings
- Plants/Pollen

### FAST FACTS

- It is estimated that 35 million Americans suffer from upper respiratory tract symptoms that are allergic reactions to airborne allergens.
- The respiratory symptoms of asthma which affect approximately 11 million Americans are often provoked by airborne allergens.
- Overall, allergic diseases are among the major causes of illness and disability in the US, affecting as many as 40-50 million Americans.

Source: [www.niaid.nih.gov/publications/allergies](http://www.niaid.nih.gov/publications/allergies)



## Technically Speaking: Allergic Reaction

Allergies are an abnormal response of the immune system. People who have allergies have an immune system that reacts to a usually harmless substance (allergen) in the environment. Exposure to indoor allergens can cause an allergic reaction.

Allergic reactions can be mild with symptoms that affect a specific area of the body (itchy eyes, congestion); moderate with symptoms that spread to other parts of the body (rash, hives); or severe in which there is an intense response that affects the whole body. This is called anaphylaxis, a rare, life-threatening emergency. It may begin with the sudden onset of itchy eyes and progress quickly to more serious symptoms such as abdominal pain or swelling that makes breathing difficult.

In most cases, allergic disease occurs when a susceptible individual is exposed to an allergen and becomes immunologically sensitized. In the early stages of sensitization, people who are sensitized may not develop symptoms of disease. Additional exposures to the sensitizing allergen leads to the development of an allergic reaction, which can get worse over time with repeated exposures.



## Tools for Schools

Allergies account for 2 million missed school days. Environmental triggers in schools may trigger asthma attacks and allergic reactions.

The key "tool" to addressing and preventing IEQ problems is the EPA *Tools for Schools* program.

- If your school district has implemented the Tools for Schools program, it is important to sustain it by making sure the district conducts a **fall kick-off meeting** to plan this year's TfS activities. If the program needs to be revitalized, encourage the district to contact us to schedule a **refresher workshop**.
- If the district has not implemented or completed TfS, encourage the district to contact us about setting up our free training program.

To see which districts have implemented the program, go to <http://www.ct.gov/dph>. Go to Environmental Health/School Environmental Health and click on the map.



## PUTTING ON AIRS\* \*Asthma Indoor Risk Strategies

The PUTTING ON AIRS (AIRS) Program aims to reduce acute asthma episodes and improve asthma control through recognition and elimination/reduction of environmental and other asthma triggers.

The AIRS Program provides the patient/family/caregiver with one or more, one-on-one, interactive, health education sessions focusing on patient education and asthma self-management. A registered nurse conducts the education session, reviews medications, and provides ongoing asthma case management. A registered sanitarian conducts an environmental assessment of the home and/or caregiver location(s). Follow-up is conducted with the patient/family/caregiver at two-week and three month intervals.

The program has been shown to decrease asthma-related adverse events by 62 - 85%. The events monitored included asthma-related visits to the emergency department, visits to a physician, and missed days of school due to asthma.

The AIRS program is currently being conducted through the following health departments/districts: Northeast, Naugatuck Valley, Milford, Ledge Light, Bridgeport, Meriden, and Waterbury.

Contact the CTDPH Asthma Program for more information: 860-509-8251 or <http://www.ct.gov/dph>



## Literature Review

### Clearing the Air: Asthma and Indoor Air Exposures Institute of Medicine (IOM)

This report is an in-depth review of the relationship between indoor exposures and asthma by a multidisciplinary committee convened by the IOM. The goal was to determine how strongly the research data implicated various components of indoor air as causes of asthma and to evaluate the state of the scientific evidence concerning specific strategies for exposure mitigation and prevention.

It contains a summary of research recommendations and overall conclusions.

<http://www.iom.edu/CMS/3793/5511.aspx>

## Helpful Web Links

<http://www.aafa.org>: Asthma and Allergy Foundation of America. Educational Materials.

<http://www.aaaai.org>: American Academy of Allergy, Asthma & Immunology. Technical Information.

<http://www.aanma.org>: Asthma & Allergy Network/ Mothers of Asthmatics. Information for parents.

<http://www.epa.gov/iaq/schools/managingasthma.html>  
EPA IAQ Tools for Schools: Managing Asthma in the School Environment

