

Asthma & Healthy Homes



We all deserve a healthy home

Our home environment affects each of us daily. When you have asthma, the condition of your home environment can help you stay in school or work. It can keep you on the playing field or it can land you in the emergency room.

Asthma was responsible for 3,384 deaths in the United States in 2005. *

* American Lung Association, Epidemiology and Statistics Unit, Research and Program Services. Trends in Asthma Morbidity and Mortality. November 2007. (ALA age group analysis of NHIS through 2005.)

Asthma in NH

In 2008, 10.5% (107,000) of adults 18 years of age and older in New Hampshire had current asthma.

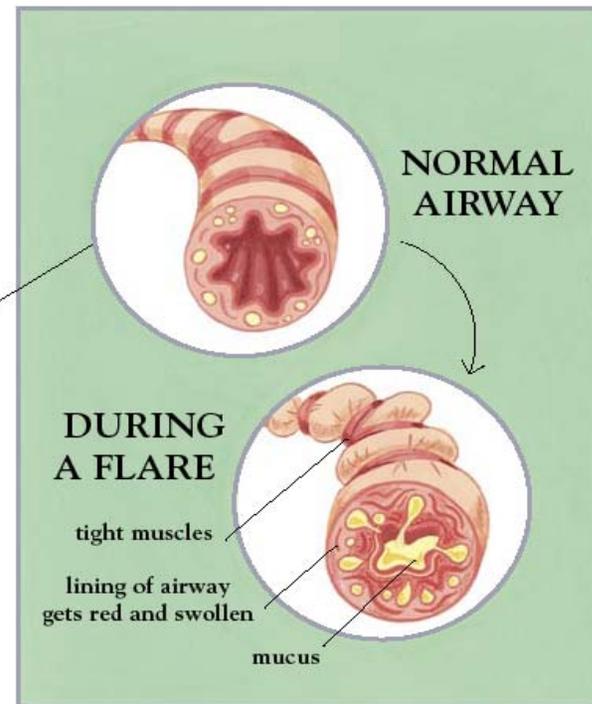
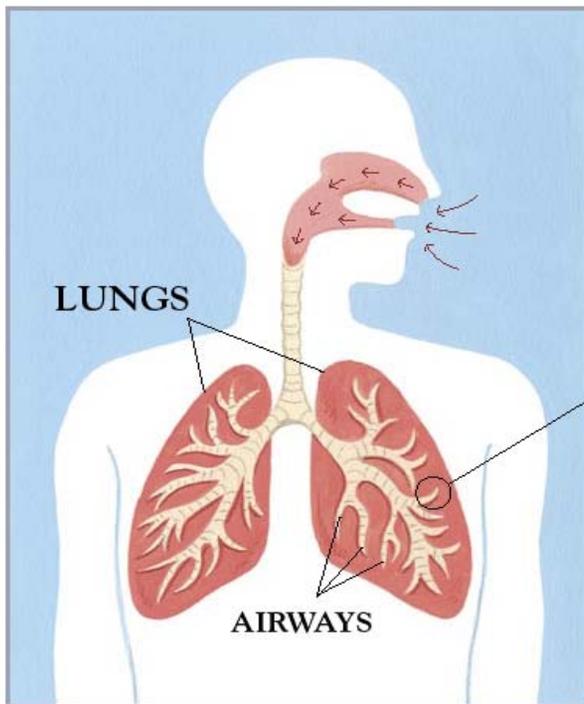
- Among children less than 18 years old, an average of 8.4% (25,000) had current asthma from 2006-2008.
- Approximately 4,000 adults and 3,000 children are newly diagnosed with asthma every year in New Hampshire.

What is Asthma?

Asthma is a chronic (long-term) lung disease that inflames and narrows the airways. Asthma causes recurring periods of wheezing (a whistling sound when you breathe), chest tightness, shortness of breath, and coughing. The coughing often occurs at night or early in the morning.

<http://www.nhlbi.nih.gov/health/health-topics/topics/asthma>

When asthma flares, it is hard to breathe.
Airways to the lungs get swollen, tight, and narrow.
They fill with mucus.



Asthma Can Be Controlled

- Asthma can not be cured but it can be controlled.
- You can control your home environment.
- You must avoid those things that make your asthma worse.
- If you have asthma talk to your physician about developing a comprehensive asthma action plan that includes control of environmental factors.

Dust Mites

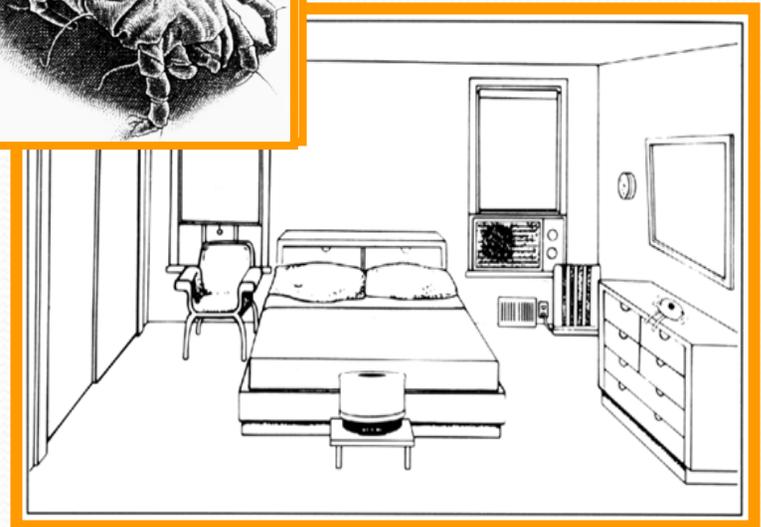
Dust mites are microscopic creatures that live in pillows, mattresses, blankets and other soft material. They live near people where they feed on the dead skin that we shed every day.

Highest levels found in mattresses and bedding. Also found in carpeting, curtains and draperies, upholstered furniture, and stuffed toys. Dust mites are too small to be seen with the naked eye and are found in almost every home.



How to Control Dust Mites

- Use bedding encasements
- Wash bed linens weekly
- Avoid down fillings
- Limit stuffed animals to those that can be washed
- Reduce humidity level (between 30% and 50% relative humidity per EPA-3)
- Cover upholstered furniture with washable slipcovers or sheets



Dust Mites are Everywhere

- Avoid carpeting, and if present vacuum regularly using a high efficiency filter.
- Mop hard surfaces regularly.
- Dust window sills, clean window treatments in hot water.
- Replace curtains with wipeable blinds.
- Keep humidity below 50%

Pests

Cockroaches and Rodents are often found in areas such as kitchens, bathrooms and basements.



Reducing Exposure to Cockroaches



- Remove as many water and food sources as possible to avoid cockroaches
- Avoid pesticides
- Take trash out daily
- Keep food in airtight containers

Warm Blooded Pets

Cat and dog dander can cause serious asthma symptoms. They can also carry outdoor allergens inside the house on their coats.

Give your pets their own sleeping area and clean their bedding weekly.

If you are allergic to an animal the best treatment is to get the animal out of the house.



Mold

Often found in areas with excess moisture such as kitchens, bathrooms, and basements. There are many types of mold and they can be found in any climate.



Reducing Exposure to Mold



Eliminating mold and the moist conditions that permit mold growth may help prevent asthma exacerbations.

Tobacco Smoke

Secondhand smoke is the smoke from a cigarette, cigar or pipe, and the smoke exhaled by a smoker.

Secondhand smoke can trigger asthma episodes and increase the severity of attacks. Secondhand smoke is also a risk factor for new cases of asthma in preschool-aged children.



Tobacco Smoke



- Opening windows or using fans or air conditioners will not stop secondhand smoke exposure.
- Make your car and home smoke-free.
- Family, friends or visitors should never smoke inside your home or car.
- Keep yourself and your children away from places where smoking is allowed. If you smoke, smoke only outside .
- Ask your doctor for ways to help you stop smoking.

Nitrogen Dioxide

- Nitrogen dioxide (NO_2) is an odorless gas that can irritate your eyes, nose and throat and cause shortness of breath. NO_2 can come from appliances inside your home that burn fuels such as gas, kerosene and wood. Nitrogen dioxide forms quickly from emissions from cars, trucks and buses, power plants and off-road equipment. Smoke from your stove or fireplace can trigger asthma.



Nitrogen Dioxide

- Ventilate the shower and cooking area
- Make sure air ducts are unobstructed



Home Visits Develop a Partnership through Education

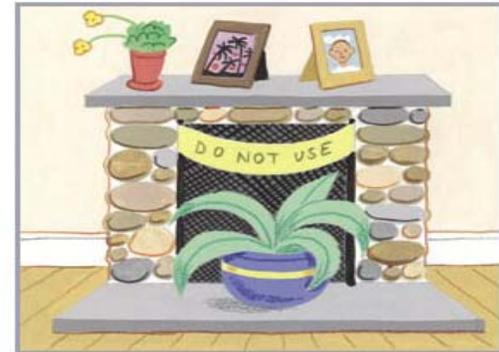
There is no cure for asthma, but there are many ways to control your asthma. First, avoid things that make your asthma worse.



Stay away from animals with fur or feathers



Keep mold away



Stay away from smoke



Close windows on bad air days



Avoid heavy drapes on windows

Use furniture with no upholstery

Use special covers on mattress and pillow

Wash bed linens in hot water

No carpeting

Control dust in your home

Other Asthma Triggers

Air pollution

Trees, grass, and weed pollen



In Summary

- If it is a hard surface, WIPE IT
- If it is a washable fabric, hot water WASH IT
- If it cannot be wiped or washed, ENCASE IT
- If it cannot be wiped, washed, or encased, REMOVE IT
- If the indoor air is not dry, DEHUMIDIFY IT

Local Case Study – Manchester Health Department

- The **Manchester Asthma Education and Outreach Project** addressed asthma triggers, and identified possible environmental mitigation measures for children diagnosed with persistent, moderate to severe asthma.
 - Funding provided by the EPA Healthy Communities Grant Program.
- Overall health-related outcome targets for the Project included: 1) reduction & control of asthma symptoms, 2) decreased number of unplanned doctor visits, and 3) decreased emergency room visits and hospitalizations due to asthma.
 - Overall case management provided by an RN who was also a Certified Asthma Educator.
 - Peer educators from local agencies, such as The Way Home, provided family support as well.
 - An MHD Environmental Health Specialist assisted with asthma home assessments.

Local Case Study – Manchester Health Department

- 27 families in Manchester received program services
 - Average number of home visits/family: 2.3 visits
 - Language:
 - 67% English-speaking
 - 15% Spanish
 - 15% Arabic
 - 4% Swahili
 - 90% Renters
 - 20% No health insurance

Local Case Study – Manchester Health Department

- **Asthma Control**: 87% of families indicated that they felt their child's asthma was “well controlled” at the last home visit (no families indicated this at the first visit).
- ****Symptom Severity**: At first home visit, 47% of children were classified with severe symptom severity. At last home visit, no children met the classification criteria for severe symptom severity.
- **Self-Confidence in Symptom Management**: 40% of families were “very confident” at start of program to about 75% “very confident” at the end of the program.

**perceptions of symptom severity defined by asthma guidelines for symptom frequency

Local Case Study – Manchester Health Department

- **ER Visits**: At intake, clients averaged 1 Emergency Room visit in the past 12 months. At the last home visit, the average decreased to less than 0.5 visits per child.
- **Hospitalizations**: At intake, clients averaged approximately 0.5 hospitalizations per client. By the last home visit, the average number of hospitalizations had decreased to 0.1 visits per child.
- **Acute Unplanned Doctor Visits**: At intake, clients averaged 7.9 visits. At the last home visit, clients averaged approximately 0.6 acute care visits per child.

Little Changes Can Make A Big Difference

