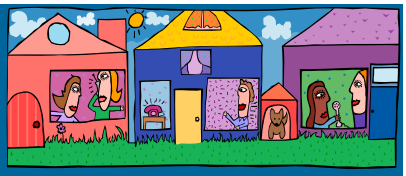
CONNECTICUT DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH SECTION
ENVIRONMENTAL & OCCUPATIONAL HEALTH ASSESSMENT PROGRAM

IEQ NEWS



We care about indoor air

Summer 2007 Issue #4

In this Issue:

What's New?

A Spreading Concern Inhalation Health Effects of Mold, *Environmental Health Perspectives* Vol. 115, No. 6, June 2007. http://www.ehponline.org/docs/2007/115-6/toc.html

Flood Cleanup and the Air in Your Home: http:/www.epa.gov/iaq/flood/index.html - booklet and poster

Mold Training:

EPA Mold Web Course: Introduction to Mold and Mold Remediation for Environmental and Public Health Professionals. http://www.epa.gov/mold

Environmental and Occupational Health Assessment Program
Indoor Environmental Quality Unit
Marian Heyman Joan Simpson
Brian Toal Kenny Foscue

Phone: 860-509-7740
Fax: 860-509-7785
Email: joan.simpson@ct.gov

FOCUS: Humidity and Mold

Hazy, hot, and humid weather is not only uncomfortable, but can promote fungal growth indoors and out. By controlling humidity, preventing condensation, and keeping buildings well ventilated, the growth cycle of indoor molds can be halted.

Relative Humidity is the amount of water vapor in the air and is measured in percent (%). Humidity levels are relative to the temperature of the air; the higher the temperature, the more moisture the air can hold. Building interiors should be kept below 60% relative humidity (RH) to minimize mold growth.

Dehumidifiers and Air Conditioning Units can be used to take moisture out of the air. Dehumidifiers are usually placed in the basement because the walls are usually below grade, and are cooled by the earth's temperature, sometimes reaching below the dew point. This is the temperature at which water will condense from a humid air mixture. Dehumidifiers must be emptied when the bins fill with water, or hard-piped to a drain.

To check to see if the dehumidifier is set properly, residents may purchase a hygrometer at most hardware or electronics stores, to check the RH. If the hygrometer has been in the room for about 10 minutes and it shows that the RH is still above 60% while the dehumidifier has been running for several hours, this indicates that the dehumidifier should either be turned up to a higher setting, or it may not be large enough to cover the area in which it is being used. In such cases, additional dehumidifiers may need to be added.

Cool and Dry

Maintaining a cool and dry building interior is very important, especially during the summer months, so that damp areas can dry out, and mold spores have less of a chance to grow on furnishings and home goods.

Ventilation

During the summer, avoid bringing warm, moist air into a building and delivering through a mechanical ventilation system unless the air can be *conditione*d to remove some of the moisture. The goal is to keep the RH below 60% to minimize mold growth.

Condensation is the process by which water vapor comes out of the air and becomes liquid water. Some of the places to look for condensation in a building are drain lines from air conditioning units, and plumbing pipes and/or fixtures where "sweating" is observed. When this water drips onto windowsills, wallboard, wood floors, studs, beams, or siding, mold growth will soon follow.

Technically Speaking:
Thermal Surface Differentials

Where hot, high humidity air and cold surfaces meet, condensation forms on the cool surface. This is why your beer or soda bottle sweats when you take it out of the fridge on a summer day. Similarly, air conditioners make the room side of walls cool, as well as the air within the room. Two places where this temperature difference can cause problems are under wall paper and inside wall cavities.

- Mold Growing Underneath Vinyl Wall Covering

Condensate forms on the cool side of the wall (room side) and can't dry because the wall is covered with a non-breathable surface - vinyl. This creates a perfect breading ground for mold (moisture, dark cellulosic food source from wallboard).

- Mold Growing In Wall Cavities

If condensate lines or sweating pipes drip continuously onto porous building materials inside of wall cavities, it can become a breeding ground for mold.

Tools for Schools

It is summertime – time to prevent mold growth in school buildings. Here are a few helpful guidelines:

- Keep ventilation running and monitor humidity levels in the building to a level below 60 %. Use air conditioning to help remove moisture from indoor air.
- Check for mold growth (sight and smell) weekly.
- Make sure carpeting is thoroughly cleaned and dried to avoid mold growth.

For more summer maintenance tips, see EPA's fact sheet: **http://www.epa.gov/iaq/schools/pdfs/webconferences/summer/summer_tips.pdf**

Has your school district implemented EPA's Tools for Schools? All schools in Connecticut are required by law to have an indoor air program. The Departments of Public Health and Education have gone on record endorsing Tools for Schools as the best and preferred program. There is free training provided to assist schools in adopting TfS. To see if your district has implemented the program, go to **http://www.dph.state.ct.us/Environmental_Health/Schools.htm** and click on the map. Call 860-509-7740 for more information.

How to Control Humidity

- Purchase and use a dehumidifier in the basement.
- Use a hygrometer to check the RH; keep it below 60%.
- Use air conditioning to control moisture in the air, when feasible.
- Check condensation coming from air conditioning units, plumbing fixtures and pipes, etc. Insulate pipes to prevent them from "sweating." Direct water flowing from condensate lines away from the building. It is important to keep condensate away from porous building materials like wallboard and wood, or mold will likely follow.
- Avoid use of non-breathable wall coverings.
- Don't close buildings up tight for the summer if there is moisture inside.

Frequently Asked Questions

Q: Are there any standards for mold or indoor air quality in CT or US?

A: No, there are no standards.

Q: Should I have my house tested for mold?

A: CT DPH does not advise routine air testing for mold. Refer to : Indoor Air Quality Testing Should Not be the First Move at http://www.dph.state.ct.us/EOHA/Documents/ieq_testing.pdf

REMINDER: There are NO state statutes that cover warm temperatures in buildings.

Legislative Update

- **PA 07-168** Banning Pesticides on school grounds (middle schools). Extends ban to public middle schools; transfers enforcement from Dept. of Education to DEP.
- **PA 07-100** Cleaning products in state owned buildings. Mandates use of green cleaning and sanitizing products in all state buildings.
- **PA 07-124** Inspection & Evaluation of IAQ in State Buildings. Covers only NEW state owned or leased state buildings, not existing owned buildings.

Details can be found at www.cga.ct.gov.

Helpful Web Links

Measuring Humidity in Your Home: http://www.schl.ca/en/co/maho/yohoyohe/momo/momo_002.cfm
Choosing a Dehumidifier: http://www.schl.ca/en/co/maho/yohoyohe/momo/momo_001.cfm

Mold Prevention Strategies and Possible Health Effects - The After Effects of Hurricanes and Major Floods, MMWR June 9, 2006 . Http://www.cdc.gov/mmwr/pdf/rr/rr5508