

IEQ NEWS



We care about indoor air

Spring 2009

Indoor Environmental Quality

Issue #11

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Newsletter Survey

HOW ARE WE DOING? We would like to assess the effectiveness/impact of this IEQ newsletter. We would appreciate it if you would complete this 5 question survey by clicking on the link below:

http://www.surveymonkey.com/s.aspx?sm=zj29epxN2hil3FioPFqkJK_3d_3d

Save the Date: June 10 8:30 am-12:30 pm - Residential Mold & Moisture Complaints: A Case Study Exercise

In the News:

Chinese Drywall a Threat to Homeowners? Click on the link below for more information.

http://www.consumeraffairs.com/news04/2009/02/chinese_drywall.html

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

J. Robert Galvin, MD, MPH, MBA
Commissioner

<http://www.ct.gov/dph>



FOCUS: WORKPLACE IEQ

Indoor air quality in the workplace can impact a worker's health, comfort, and productivity. Almost 70% of the US workforce works in indoor office settings.

Common work-related symptoms are stuffy or runny nose, fatigue, itchy or burning eyes, and coughing or sneezing. People who smoke or have allergies experience more symptoms.

Major concerns are thermal comfort/ ventilation, dust/clutter, volatile organic compounds such as those found in cleaning products and moisture associated mold.

Buildings were made "tighter" to save energy costs during the 1970's. This resulted in higher concentrations of pollutants remaining in the building. It is critical that the heating, ventilation and air conditioning (HVAC) system is adequate and operating properly. The HVAC system filters and circulates the air while it heats or cools the building.

There are no IEQ standards for office buildings; only for manufacturing sites. Therefore, solving IEQ problems usually does not involve air testing but rather a visual walkthrough inspection.



Two of the occupational medicine clinics in the state that serve workers and businesses who may be affected by workplace IEQ health issues are:

Yale Occupational & Environmental Health Clinic
203.785.4197

<http://www.med.yale.edu/intmed/ocome>

UConn Occupational & Environmental Health
Center: 860.679.1349

<http://www.oehc.uhc.edu/>



Tools for Office Buildings Program

The CT DPH has developed an IEQ program for use in office buildings. It is modeled after the successful Tools for Schools program. It involves training a building team, distributing workstation checklists, conducting a walkthrough investigation and developing a report of findings and recommendations.

It is a practical, easy to implement team-based program that will provide a comprehensive building assessment. The outcome is improvement in the indoor quality of the office environment, productivity and morale. A pilot program was conducted at CT DPH that demonstrated this.

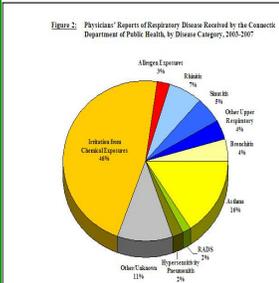
If you would like to implement this program at your workplace contact Joan Simpson or for more information or go to: <http://www.ct.gov/dph> - environmental health/IEQ/workplace.



Occupational Health: Respiratory Diseases Affecting Connecticut Workers

Connecticut state law requires any physician diagnosing a work-related injury or illness in the state to report that case through a standard protocol to the Connecticut Department of Labor and Department of Public Health (DPH). Approximately 98% of the reports received are submitted from a network of 19 different Occupational Medicine and auxiliary clinics in the state. DPH collects and analyzes these reports of work-related disease as part of our regular occupational health surveillance activities.

From 2003-2007, a total of 9,370 reports of work-related illness and injury were received by DPH through the physician reporting system. Of those, 652 (7%) were diagnoses of work-related respiratory diseases.



By far, the greatest proportion of work-related respiratory conditions reported by physicians during this time period (46%) were attributable to respiratory irritation secondary to chemical inhalation.

Accidental chemical exposures resulting in work-related respiratory conditions are a continuing concern in workplaces in Connecticut and any continuing efforts to reduce respiratory hazards in workplaces should include a specific focus on potentially hazardous chemicals. These efforts should specifically address hazard controls to reduce or eliminate exposure to those chemicals, including chemical substitution or elimination, green cleaning best practices, engineering and work-practice controls, and personal protective equipment. For more information: <http://www.ct.gov/dph> - environmental health/occupational health.

Office Ergonomics



Physical factors such as lighting, noise, temperature and ergonomics can contribute to building occupant's perceptions about IEQ in the office. Ergonomics applies science to workplace design to reduce worker discomfort and fatigue in order to maximize productivity.

In 2002, employers reported a total of 487,900 lost workdays due to work-related musculoskeletal disorders, representing nearly 50% of all lost work days. In addition, employers have paid approximately \$20 billion annually in direct worker's compensation costs. Indirect costs associated with these injuries increase that total by another \$60 billion annually.

To address this issue, changes should be made in three areas:

1. Workstation Set Up: Re-arranging computers, monitors, the mouse and telephone so that all are easily accessible and at the right height can make an enormous difference. If more changes are needed, you can adapt what you have or purchase equipment that fits the user. Footrests, lumbar support cushions, height and angle adjustable keyboard/mouse trays and monitor stands are ways to improve the "fit" of existing setups.

2. Mouse Placement and Handling: Reaching for and using a mouse that is too far away from the centerline of the body can cause shoulder problems. Make sure it is closer to you and on the same plane as the keyboard. If you have hand or finger pain, the mouse may be too small or too large for you, or a different style device may be warranted.

3. Upper Extremity Posture: To reduce injury and repetitive trauma it is important to maintain a neutral body position and avoid sharp angles. Cradling a telephone, working with hands bent upward, leaning on elbows, hunching shoulders, and slouching can all take a toll on the body.

Educating the workforce to pay attention to these things is helpful in improving overall physical health and well being.

For more information: <http://www.lbl.gov/ehs/ergo/>



Rising energy costs and tight budgets may impact a school's ability to address IEQ issues. Some suggestions on maintaining good IEQ while saving energy include:

- **Make sure all parts of the HVAC system are working well:** Maintain air filters and belts, correctly calibrate systems controls including clocks, timers and switches, and check that outside dampers are not leaking and are operating properly.
- **Avoid running building systems 24 hours a day.**
- **Make sure airflow around vents is not blocked.**
- **Use heat recovery ventilators and energy recovery ventilators (HRV/ERVs).** These systems precondition incoming air from outdoors.
- **Consider setting thermostats at 68-70 degrees during the heating season,** and 78 degrees in the warmer months.

For more information and an energy conservation checklist: <http://www.ct.gov/dph> - environmental health/IEQ/school

Literature Review



My Office Is Killing Me. Jeffrey C. May; The Johns Hopkins University Press 2000.

Covers basic IEQ health concerns, the building envelope (systems and materials), discusses different office environments and presents practical tips to assess potential pollutants.



Helpful Web Links

- IBEAM: <http://www.epa.gov/iaq/largebdgs/i-beam/index.html>
- An Office Building Occupant's Guide to Indoor Air Quality, EPA: <http://www.epa.gov/iaq/pubs/occupgd.html>
- EPA Ventilation and Air Quality in Offices Fact Sheet: <http://www.epa.gov/iaq/pubs/ventilat.html>