

Practice Prevention

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### Mold – Is Your House a **SCIENCE EXPERIMENT**

- Does your child go to school healthy and come home sick in the afternoon?
- Does an area of your home smell earthy or musty, or like alcohol?
- Is your house continually damp?
- Do you or your children have cold or flu-like symptoms, or new or worsening asthma or allergies?

**Mold in your home or at your child's school may be part of the problem.**

#### WHAT IS MOLD?

Mold is around us all the time. More than 1000 species have been found in homes in the United States, according to the CDC. This group of fungi spreads via lightweight spores that travel long distances through the air, entering the indoor environment from outside. Mold spores can survive for long periods of time until conditions become conducive to their development.

#### WHEN, WHERE & WHY?

Mold becomes a health risk when it grows out of control in the indoor environment. Mold will grow when provided with both food and moisture, and will generally flourish in warm, damp and humid conditions. High growth generally occurs in places that have been damaged by flooding or water leakage, and may occur throughout a building when indoor humidity levels are chronically high.

Different species of mold require different kinds of food and levels of moisture. They will grow anywhere from wallpaper, carpet, wood and ceiling tiles to supply ducts, humidifiers, soil and dust. Some species of mold require very little moisture to thrive – such as those that eat away at the paper of musty old books – while others will only grow near standing water, such as a continually leaking pipe.

#### WHY IS MOLD A PROBLEM?

Almost every species of mold has the ability to affect human health. The most common health effects of mold are respiratory problems, allergic reactions or cold and flu-like symptoms caused

by the presence of spores and desiccated mold floating in the air. A more serious but less common concern is the effect of species of mold that produce chemical compounds that can be toxic to humans, including mycotoxins and antibiotics.

#### IMMUNOLOGICAL EFFECTS

Molds have the greatest impact on individuals who already have compromised immune systems or have pre-existing respiratory illnesses. Infants, the elderly and pregnant women have increased risk of experiencing problems associated with mold. Living around mold for an extended period of time may cause increased sensitivity to develop.

#### TOXIC EFFECTS

Some species of mold have the capacity to produce toxic chemical compounds, including mycotoxins and antibiotics. The most well-known of these “toxic mold” species is *Stachybotrys chartarum*, also known as “black mold,” a greenish-black mold that often grows around places with heavy water damage and requires high levels of plant materials and low levels of nitrogen. Common locations for black mold include ceiling tiles, wood, and drywall. Other commonly occurring toxic species are *Aspergillus* and *Penicillium* (see references 1,2).

Exposure to toxic molds is associated with diverse symptoms, including fatigue, lack of concentration, nausea, headaches and respiratory and eye irritation. More severe illnesses including Organic Dust Toxic Syndrome (abrupt onset of fever, flu-like symptoms, and respiratory symptoms) and pulmonary hemosiderosis (bleeding of the lungs) may result from a single, heavy exposure to dust containing toxic mold spores or particles (1).

#### IMPACT ON CHILDREN

Children have high vulnerability to immunological effects of mold exposure such as respiratory irritation and allergic reactions to mold. Because their lungs and other organs are still developing, they have less ability to identify hazards and are more susceptible to the effects of particulates in the air (2). Those most at risk are children with mold allergies or pre-existing respiratory problems.

Exposure to toxic molds is also more dangerous for children than adults. Because biological

systems are still developing during infancy and childhood, toxic exposures have the capacity to intervene in the process of development and leave lasting impacts.

It is important to bear in mind that all molds – not only toxic molds - are dangerous and negatively impact our children's health and their ability to learn.

## **PREVENT EXPOSURE**

### 1) Monitor dampness in your home to avoid mold growth in the first place.

- Watch for water leaks and fix them immediately.
- Maintain less than 50% humidity in the air within your home.
- It may help to use a dehumidifier or air conditioner during humid months.
- Make sure your home has adequate ventilation, including fans in the bathroom and the kitchen.

### 2) Plan ahead and use common sense to limit mold-friendly environments in your home.

- Avoid putting carpets in basements and bathrooms.
- Replace or remove carpets or upholstery that have been flooded or soaked.

### 3) Keep your eyes and your nose open to signs of mold growth.

- Watch for slimy or fuzzy patches on walls, ceilings, windowsills, etc.
- Be wary of earthy or musty odors or a smell similar to alcohol. Both indicate growth of mold that may be concealed underneath carpets, linoleum, tiles, wallpaper, etc (3).

### 4) Pay attention to how you and your children are feeling after you move into a new home.

- If after moving to a new home, you or your children experience symptoms similar to those described in this column, consult a doctor who specialized in environmental health. There could be other explanations for the same symptoms, such as the presence of lead paint, but no matter the source, it is important to bring them to the attention of a doctor.

### 5) Be vigilant about your child's school environment as well as your own home.

- Children spend a significant amount of their day in the school environment. If there is a

mold problem at school, your child's health and learning potential may be impacted.

- Walk through your child's school building and watch and smell for signs of mold as you would do in your own home.
- Pay attention if your child consistently leaves home healthy and comes home sick from school.
- If you believe there is a problem, bring up the issue with the school administration (2).

## **WHAT TO DO ABOUT IT IF YOU HAVE A MOLD PROBLEM**

If you identify mold growth in your home or at your child's school:

- Don't wait to test whether the mold is toxic. All molds are harmful to health, so spend your time getting rid of it rather than testing for the variety.
- If the problem is very large, hire professionals to clean up the mold. Clean up may stir up particles in the air or release toxic substances that were not previously in circulation.
- Extensive clean-up instructions are available at the Occupational Safety and Health Administration's website at:  
<http://www.osha.gov/dts/shib/shib101003.html>.

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For more information and other environmental health prevention tips, visit the

INSTITUTE FOR CHILDREN'S ENVIRONMENTAL HEALTH at
WWW.ICEH.ORG.

See also the Healthy Schools Network, www.healthyschools.org, Children's Environmental Health Network, www.cehn.org, and the Children's Health Environmental Coalition, www.chechnet.org.

References:

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