

Mold in the Home: Health Concerns

This fact sheet provides information to people about health concerns related to mold exposure. It also provides general guidelines about mold detection, cleanup, and removal of mold-contaminated materials.

Main Points:

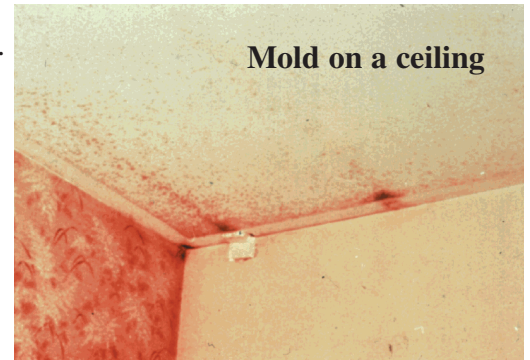
- Without water, mold cannot survive.
- All molds are potential health hazards and should be removed.
- Sampling for mold is expensive and usually not necessary. If you see it, remove it.
- Guidelines for clean-up and removal are provided on page 4.

What is Mold?

Molds are microscopic organisms that are found virtually everywhere, both indoors and outdoors. Molds are types of fungi that live on plants, foods, dry leaves, wood and other organic materials. Mold spores are tiny structures that are the reproductive part of the microorganism. A group of mold spores can be seen by the naked eye. The spores often look velvety or powdery, and appear in colors ranging from pale white, yellow, orange or green, to dark brown or black. The spores are very tiny and light-weight, allowing them to travel through the air. Sometimes some mold spores can cause allergic symptoms similar to those caused by plant pollen.

Mold needs three things to grow:

- 1) a wet or damp environment, and
- 2) a food source such as leaves, wood, paper products, wall board, insulation materials, ceiling tiles and other organic based materials, and
- 3) a temperature similar to what humans live with.



Mold on a ceiling

Should I be concerned about mold in my home?

Yes, but only when it is present in large amounts. It is important to realize that some mold is present in every home, and does not pose a health hazard when not growing on water-damaged material. When mold spores are present in large amounts, they may cause allergic reactions, trigger asthma episodes, and other respiratory problems. It is important to remove mold from hard, nonporous surfaces, and to discard porous items that are contaminated with mold, because even the dead spores can cause allergy and other respiratory problems. Mold itself can also cause structural damage to your home.

Can mold become a problem in my home?

Yes.

Mold needs moisture to thrive and multiply. These are major sources of indoor moisture that can cause mold problems:

- flooding
- backed-up sewers
- plumbing leaks
- leaky roofs
- humidifiers
- ice dams
- damp basements
- moisture from combustion appliances such as furnaces or stoves



How am I exposed to indoor molds?

Mold is found everywhere, both outdoors and indoors. It is common to find mold spores in the air in Connecticut homes. Mold spores primarily cause health problems when they become airborne and are inhaled. People can also be exposed to mold by eating moldy foods. Exposure can also occur through skin contact, although the health risks are expected to be minimal.

What are Possible Health Effects?

Typical symptoms (alone or in combination) reported by people exposed to mold may include:

- wheezing, breathing difficulties
- asthma attacks
- dizziness
- dry, hacking cough
- sore throat
- headaches
- watery, burning reddened eyes
- nasal and sinus congestion
- shortness of breath
- skin irritation

Note: These symptoms are not specific to mold exposure but can also be caused by other conditions such as colds or other types of allergies. See your physician to find out the cause of your symptoms.

How much mold does it take to make me sick?

It depends. For some people a few mold spores can cause health problems. For most people, it may take much more. If you have health effects that you believe are related to mold, you should consult with your physician and take steps to eliminate the excess moisture, and remove the mold (see cleanup and removal section on page 4).

Who is at increased risk when exposed to mold?

Exposure to large amounts of mold inside buildings is not healthy for anyone. Visible mold should be cleaned up as soon as possible (within 2 days). It is then important to quickly identify and correct any moisture sources before mold levels increase and health problems develop. The following groups of people appear to be at higher risk for ill health effects due to mold exposure:

- infants and children
- elderly
- immune compromised patients (people with HIV infection, cancer, autoimmune disease, liver disease, anyone receiving chemotherapy)
- individuals with existing respiratory conditions or sensitivities such as allergies and asthma

Are some molds more hazardous than others?

Some of the natural byproducts of mold metabolism are chemicals that can cause irritation or allergy. Certain types of molds can produce mycotoxins which are chemicals that are toxic to humans, animals, and plants. Most of what we know is about mycotoxin exposure from eating contaminated foods. Very little is known about inhaling mycotoxins. Health effects in humans from mold vary with a person's health status, the specific mold by-product, the amount of exposure, and the route of exposure. However, in most instances it is far more important to remove mold and eliminate moisture sources than to spend time and resources counting and identifying what type of mold is present.

What About Stachybotrys?

One mold, *Stachybotrys chartarum* (SC), has received media attention. SC is a dark greenish-black, oily looking mold that grows on materials with high cellulose content (sheetrock, wood, etc) that are constantly soaked with water. **SC does not grow on materials usually found in bathrooms.** SC needs lots of water to survive and is a relatively uncommon mold. SC is capable of producing a mycotoxin and was once suspected of causing more serious health effects than irritation in the very young. However, it has not been proven that SC causes these other health effects.

Should I test my home for mold?

The Connecticut Department of Public Health does not recommend testing as the first step to determine if you have a mold problem. There are no air standards for levels of mold indoors. Air testing almost never affects the final recommendations. If you can see or smell mold or mildew, you have a moisture and mold problem. The first step is to clean, disinfect, and dry out the moldy area. Throw out any porous materials that are moldy. Then it is important to identify the moisture source and correct it.

Be aware that sampling is expensive. On rare occasions, sampling may be useful to help locate sources

behind walls or in other inaccessible locations, and/or, to assess clean up efficacy. This usually requires hiring a professional, because mold assessments require sampling equipment not available to the general public. Do-it yourself mold kits are not recommended. Outdoor mold samples should always be collected during the same sampling time to compare with indoor results. It is critical for the lab to identify the species of mold in the samples as well as to provide number counts. Numbers alone are not useful.

If you are a tenant in a rental home or apartment, speak with your landlord about mold and moisture problems. If the problem is serious, you may want to contact your local health department.

Cleanup and Removal of Mold

Should I clean my home or hire a professional?

A first decision is whether to hire a professional or do it yourself. If the job is too large or you are allergic to mold spores or feel your health has been affected, consider using a professional cleaning company.



How do I clean mold in my home?

- Identify and remove the source of moisture. This could include improving ventilation, using a basement dehumidifier during humid months, repairing leaking roofs, or fixing plumbing leaks. After the moisture source has been corrected, begin the cleanup and drying out process. You can purchase a hygrometer from your local hardware store. This instrument measures the humidity level. Be sure to keep the humidity level below 60%.
- Mold-contaminated materials that cannot be dried out and thoroughly cleaned should be discarded. This may include ceiling tiles, sheetrock, plaster, wood products, and carpets. If there has been flood damage, replace all sheetrock and insulation damaged by water up to at least 12 inches above the high water mark. When handling moldy materials, wear a respirator with a HEPA filter (not a dust mask) to protect you from breathing airborne spores and wear rubber gloves.
- Clean mold on hard, non-porous materials such as plastic, glass and metal with a bleach and water solution (1 part bleach plus 9 parts water). Bleach can irritate your eyes, nose, and throat. Ventilate the area well and wear rubber gloves and eye protection. Allow the bleach solution to dry naturally for 6 to 8 hours. Remember, NEVER mix bleach with ammonia; the vapors are toxic!

What can I save? What can I toss?

Use your best judgment. If the material absorbs water, it is considered porous. Porous materials should be thrown out. Materials such as hard plastic, glass, and metal are non-porous and can be cleaned.

For More Information, contact:

Your Local Health Department: http://www.dph.state.ct.us/local_health/index.asp or:

Connecticut Department of Public Health
Environmental Health Section
Environmental & Occupational Health
Assessment Program
410 Capitol Avenue, MS # 11EOH
Hartford, CT 06134-0308
Tel: (860) 509-7740, Fax: (860) 509-7785

Mold Web Sites:

CT DPH: <http://www.ct.gov/dph/mold>

US EPA: <http://www.epa.gov/iaq>



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