



## Mold Control and Cleanup Basics

### Mold Control Basics

- The key to mold control is moisture control.
- If mold is a problem in your home, you should clean up the mold promptly and fix the water problem.
- It is important to dry water-damaged areas and items within 24-48 hours to prevent mold growth.

### Mold Cleanup Basics

Act quickly. Mold damages what it grows on. The longer it grows, the more damage it can cause. If the mold growth covers less than 10 square feet you can handle cleanup yourself.

*Follow these guidelines:*

- Scrub mold off hard surfaces with detergent and water, and dry completely.
- Fix plumbing leaks and other water problems as soon as possible. Dry all items completely.
- Absorbent or porous materials, such as ceiling tiles and carpet, may have to be thrown away if they become moldy. Mold can grow on or fill in the empty spaces and crevices of porous materials, so the mold may be difficult or impossible to remove completely.
- Avoid exposing yourself or others to mold (see discussions: What to Wear When Cleaning Moldy Areas and Hidden Mold).
- Do not paint or caulk moldy surfaces. Clean up the mold and dry the surfaces before painting. Paint applied over moldy surfaces is likely to peel.
- If you are unsure about how to clean an item, or if the item is expensive or of sentimental value, you may wish to consult a specialist. Specialists in furniture repair, restoration, painting, art restoration and conservation, carpet and rug cleaning, water damage, and fire or water restoration are commonly listed in phone books. Be sure to ask for and check references. Look for specialists who are affiliated with professional organizations.

### What to Wear When Cleaning Moldy Areas

**Wear an N-95 respirator** to avoid breathing in mold or mold spores. These respirators are available at many hardware stores and from companies that advertise on the Internet. (They cost \$12 to \$25.) Some N-95 respirators resemble a paper dust mask with a nozzle on the front; others are made primarily of plastic or rubber and have removable cartridges that trap most of the mold spores from entering. In order to be effective, the respirator or mask must fit properly, so carefully follow the instructions supplied with the respirator.

**Wear gloves.** Long gloves that extend to the middle of the forearm are recommended. When working with water and a mild detergent, ordinary household rubber gloves may be used. If you are using a disinfectant, a biocide such as chlorine bleach, or a strong cleaning solution, you should select gloves made from natural rubber, neoprene, nitrile, polyurethane, or PVC (see Cleanup and Biocides). Avoid touching mold or moldy items with your bare hands.

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**Wear goggles.** Goggles that do not have ventilation holes are recommended. Avoid getting mold or mold spores in your eyes.

### **Cleanup and Biocides**

Biocides are substances that can destroy living organisms. The use of a chemical or biocide that kills organisms such as mold (chlorine bleach, for example) is not recommended as a routine practice during mold cleanup. There may be instances, however, when professional judgment may indicate its use (for example, when immune-compromised individuals are present). In most cases, it is not possible or desirable to sterilize an area; a background level of mold spores will remain – these spores will not grow if the moisture problem has been resolved. If you choose to use disinfectants or biocides, always ventilate the area and exhaust the air to the outdoors. Never mix chlorine bleach solution with other cleaning solutions or detergents that contain ammonia because toxic fumes could be produced. *Please note:* Dead mold may still cause allergic reactions in some people, so it is not enough to simply kill the mold, it must also be removed.

### **Testing or Sampling for Mold**

Is sampling for mold needed? In most cases, if visible mold growth is present, sampling is unnecessary. Since no EPA or other federal limits have been set for mold or mold spores, sampling cannot be used to check a buildings compliance with federal mold standards. Surface sampling may be useful to determine if an area has been adequately cleaned or remediated. Sampling for mold should be conducted by professionals who have specific experience in designing mold sampling protocols, sampling methods, and interpreting results. Sample analysis should follow analytical methods recommended by the American Industrial Hygiene Association (AIHA), the American Conference of Governmental Industrial Hygienists (ACGIH), or other professional organizations.

#### **Bathroom Tip**

Places that are often or always damp can be hard to maintain completely free of mold. If there's some mold in the shower or elsewhere in the bathroom that seems to reappear, increasing the ventilation (running a fan or opening a window) and cleaning more frequently will usually prevent mold from recurring, or at least keep the mold to a minimum.

### **Other Important Guidelines**

- If there has been a lot of water damage, and/or mold growth covers more than 10 square feet, contact your local health Department or Cooperative Extension for information about doing larger mold cleanup jobs.
- If the water and/or mold damage was caused by sewage or other contaminated water, then call in a professional who has experience cleaning and fixing buildings damaged by contaminated water.
- If you have health concerns, consult a health professional before starting cleanup.

The material in this Information Sheet was obtained from the United States Environmental Protection Agency publication *A Brief guide to Mold, Moisture, and Your Home* <http://www.epa.gov/iaq/molds/images/moldguide.pdf>

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## **Recommendations to Reduce or Eliminate Mold Problems**

1. Repair all water leaks from pipes roofs or walls.
2. Repair interior areas damaged by leaking water.
3. If practical, wall or ceiling cavities should be opened to inspect for mold growth inside.
4. Plaster, wallboard or ceiling tiles that have been wet should be discarded and replaced or thoroughly cleaned & dried before repairs are completed.
5. Clean all visible mold growth with a strong bleach solution. It can be sprayed on for large areas or scrubbed into the surface with a brush or sponge. Protect your skin and eyes and use good ventilation. For surfaces that may be harmed by bleach, other cleaning products that say they kill mold and bacteria may be used.
6. Always use the bathroom exhaust fan when using the bathroom to lower interior humidity levels. If you don't have a fan, open the window at least a little when showering, etc.
7. Always use the kitchen exhaust fan when cooking *if it exhausts to the outside*.
8. On dry sunny days open windows to bring in fresh dry outdoor air & exhaust humid stale air.
9. Use a dehumidifier to lower humidity. If it can be drained with a hose you won't have to empty it.
10. Remove any items in the basement that you don't need, especially wood, cardboard, old clothes, rugs, blankets, newspapers, etc. when these items are damp they grow large amounts of mold.
11. Seal the area where the furnace filter slides in with duct tape so damp basement air with mold spores & bad odors isn't drawn in and blown throughout the house.
12. Use a good quality furnace filter – one that stops 90+% of dust, mold spores, etc.
13. Make sure roof gutters are clear and downspouts deflect water well away from the foundation.
14. Add soil along the foundation to fill low spots and direct water away from the house.
15. Use high quality vacuum cleaner bags (HEPA or Micro Filtration type).
16. Consider purchasing a room air cleaner.
17. Consider purchasing a central vacuum system that exhausts to the outside.
18. Consider removing old carpeting and replacing it or just using washable are rugs.

For further information please call the Monroe County Health Department, Indoor Air & Toxics Section at 274.8075, 274.6051, 274.6053 or 274.6050.

# Information Resources for Mold and Moisture Issues

## Mold

### *Guidelines on Assessment and Remediation of Fungi in Indoor Environments*

New York City Department of Health and Mental Hygiene, Bureau of Environmental & Occupational Disease Epidemiology. Download at no charge at: <http://www.nyc.gov/html/doh/html/epi/moldrpt1.html>. This document is the unofficial industry standard on mold cleanup.

### *Mold Remediation in Schools and Commercial Buildings*

This document is produced by the United States Environmental Protection Agency and presents guidelines for the remediation/cleanup of mold and moisture problems in schools and commercial buildings. It has been designed primarily for building managers, custodians, and others who are responsible for commercial building and school maintenance. It is also a good reference for contractors and other building professionals who respond to mold and moisture situations in buildings. A free PDF file of this document can be downloaded at <http://www.epa.gov/iaq/molds/>.

### *A Brief Guide to Mold, Moisture, and Your Home*

EPA also produces this 16-page booklet. It is targeted primarily to homeowners and renters and provides them with information on how to clean up mold and prevent mold growth problems in residences. Can be downloaded at no charge as a PDF file at: [www.epa.gov/iaq/molds/moldguide.html](http://www.epa.gov/iaq/molds/moldguide.html).

## Moisture

*Moisture Control Handbook Principles and Practices for Residential and Small Commercial Buildings* (1994) by Joseph Lstiburek & John Carmody. Van Nostrand Reinhold, New York. Selling at Amazon.com.

## Indoor Air Quality

### *Building Air Quality: A Guide for building Owners and Facility Managers*

This guide, developed by the EPA and the National Institute for Occupational Safety and Health, provides practical suggestions on preventing, identifying, and resolving indoor air quality (IAQ) problems in public and commercial buildings. Information is provided on factors affecting indoor air quality; describes how to develop an IAQ profile of building conditions and create an IAQ management plan; describes investigative strategies to identify causes of IAQ problems; and provides criteria for assessing alternative mitigation strategies, determining whether a problem has been resolved, and deciding whether to consult outside technical specialists. Other topics included in the guide are key problem causing factors; air quality sampling; heating, ventilation, and air conditioning systems; moisture problems; and additional sources of information. The text of Building air Quality is available as a series of free PDF files that you can download and view or print.

Go to: <http://www.epa.gov/iaq/pubs/index.html>. Scroll down until you see Building Air Quality: A Guide for Building Owners and Facility Managers, then follow the directions on the screen.