

# **Molds in the Home: *What should you do?***

*Guidelines for preventing and controlling molds in the home*



**Community IPM Education Series**

**MSU Pesticide Education Program  
Extension Bulletin E-2814**

## What is mold?

Molds are fungi that are found almost everywhere, inside and outdoors, year round. Molds act as nature's decomposers, breaking down organic matter, and can be various colors including white, orange, green, or black. Molds reproduce by releasing microscopic spores into the air, which can enter homes through windows, doors, cracks, and vents.



When mold spores land on damp material they may thrive. Molds need moisture to grow. Controlling moisture sources in your home is the most important step you can take to ensure your home remains mold free.

## What are the health effects of mold in the home?

Sensitivity to mold varies from person to person. One person may react severely to levels that cause no symptoms in another person. In general, the following groups are most susceptible to mold:

- Infants and children.
- The elderly.
- Immune compromised individuals.
- People with respiratory problems such as allergies and asthma.

Exposure to mold and mold spores can cause a range of allergic reactions. These include: eye irritation (watery, burning, itchy, blurred vision), runny nose, sore throat, sneezing, nasal and sinus congestion, coughing, wheezing, difficulty breathing, rhinitis, asthmatic episodes, headaches, and fatigue.

## How do I clean up mold in my home?

Any treatment of mold must begin with stopping the water coming into the area, whether it is by leak, condensation, excessive humidity, or flooding. If an area is cleaned, but the moisture problem remains, the mold will return.

Cleaning will dramatically increase the amount of mold and mold spores in the air. During cleaning, use disposable rubber gloves, goggles, and a respirator (N-95 or TC-21C cartridge) available at your local hardware store. Some molds may also irritate the skin, so long sleeve shirts and pants are advisable for avoiding direct contact. Make sure the area is well ventilated. Open windows and doors and use fans to create a path of fresh air into the cleanup area that exits through the nearest opening to the outdoors.

## Should I hire a professional?

Cleaning up mold will increase your exposure to mold and bleach fumes. If you have respiratory problems like asthma or emphysema, or the affected area is large, consult with a professional.

Having someone test mold is not usually a necessary first step and can be expensive. If you can see or smell mold, you probably have a mold problem.

Mold may be hidden behind walls, wallpaper, panel, or embedded in porous material. If after cleaning mold, you still notice an odor you may have hidden mold. You may wish to hire a professional firm when mold is in difficult to reach places such as in heating, ventilating and air conditioning (HVAC) systems.

## Follow these steps to clean up mold:

1. Identify and correct the moisture problem.
2. Remove, bag, and discard non-essential porous material that has been heavily contaminated (i.e., ceiling tiles, leather, cloth, sheetrock, plaster, paneling, wood products, paper, carpet, padding, etc.). When removing drywall or sheetrock, cut at least 12 inches beyond the area of visible mold. Hard material such as glass, plastic, or metal can be kept after cleaning and disinfecting.
3. Use a non-ammonia soap or detergent in hot water and scrub the affected area. Use a stiff brush or cleaning pad on block walls or uneven surfaces.
4. Thoroughly rinse the area with hot water. A wet-dry vacuum is an easy way to pick up excess water.
5. Disinfect the area with a dilute solution of 10 percent household bleach (DO NOT mix with ammonia or other chemicals). Do not use straight bleach—it will not be more effective.
6. Completely dry the area for two or three days. Raising the temperature and using dehumidifiers will help.
7. Vacuum your home thoroughly, preferably with a HEPA or filtered vacuum.



## How can I prevent mold problems in my home?

Controlling moisture is the most effective means of preventing mold growth. Some recommendations for the home include:

- Humidity levels above 60 percent can promote mold growth. In humid months, try using an air conditioner or a dehumidifier to keep the humidity in your home below 50 percent.
- Exhaust showers, baths, cooking areas, and clothes dryers to allow steam to escape outdoors. Avoid regular drying of your clothing on indoor drying lines or racks.
- Promptly attend to leaking pipes, flooded basements, roof leaks, ice dams, and other sources of water infiltration.
- Humidifiers increase the moisture in your homes. If you use a humidifier, ensure that is properly set to avoid excessive humidity.
- Insulate pipes and install chimney liners to prevent condensation.
- Put a plastic cover over dirt in crawlspaces to prevent moisture coming up from the ground.
- Use area rugs on concrete floors that can be taken up and washed often. A vapor barrier may be necessary if carpet is installed over concrete.
- Have your heating and cooling systems inspected and serviced regularly.
- Add mold inhibitors to paint when repainting.

To prevent mold it is important to start early. If you are dealing with a flood event, cleanup should begin within 24 hours, before much mold growth can occur. Waiting will only make the mold and eventual cleanup worse. Porous material that is wet for more than 24 hours may need to be thrown out.

## What about chemical use in mold control?

In some cases a company may wish to use anti-microbial pesticides (often referred to as biocides) to clean up mold. It is vital that all such chemicals be labeled for the intended use and handled according to directions. Make sure the company you have chosen uses sound control management methods. In many indoor mold situations, anti-microbial pesticides are not needed. Very often the mold can be controlled by fixing the moisture problem and cleaning the area. Be sure to discuss control options with the company and question the use of anti-microbial pesticides. Ask the technician to describe the nature and extent of the mold problem and have the company provide references as well as product labels and material safety data sheets (MSDS) for the products they are using.

### **BEWARE! Ozone generators**

Some companies are making false or misleading claims regarding the use of ozone generators to control molds and fungi. These may include statements implying that the device is recommended or endorsed by any agency of the federal government or making any false claims to the effectiveness of the product. To report any misleading claim regarding the use of ozone generators, contact the Michigan Department of Agriculture at (517) 241-3268.

New, July 2002. Developed by the MSU Pesticide Education Program: B18 Food Safety and Toxicology Building, Michigan State University, East Lansing, MI 48824 (<http://www.pested.msu.edu>). The publication of this bulletin was made possible by funding from MSU Extension.

MSU is an affirmative-action, equal-opportunity institution. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, marital status, or family status. Issued in furtherance of MSU Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Margaret Bethel, Extension Director, Michigan State University, East Lansing, MI 48824.

