



## *Mold and Mildew*

Mold and mildew produce spores that become airborne. Some spores settle on other surfaces to create new mold colonies, while others remain suspended for long periods of time. These mold spores can be inhaled and cause allergic reactions or asthma episodes in certain people.

### *Detection*

Moisture or high humidity is required for mold growth. There are many common places where molds grow. These include:

- Walls, floors, carpeting, and on stored materials in damp basements and crawl spaces.
- Bathrooms without exhaust fans.
- Laundry areas where dryers are not vented outside or clothes are hung to dry. (About five pints of water are removed per load of clothes and may cause severe moisture problems if vented into the house.)
- Homes with new construction materials.
- Homes where there have been spills, leaks, or other water damage. (Be sure to check hidden areas, such as wall cavities and under carpeting.)
- Homes where a humidifier or an unvented combustion heater is used.

### *Solutions*

Reducing humidity levels in the home is essential. Here are some pointers to consider:

- Reduce humidity level with a dehumidifier, air conditioner, or furnace. Increase the air flow to problem areas.
- Use a vapor barrier over the soil surface to reduce the outside moisture that enters a crawl space.
- If you use a humidifier in your home, shut off or adjust the humidifier if the relative humidity level is more than 50 percent or if condensation forms on windows.
- Use exhaust fans vented to the outside when taking baths or showers and when cooking.
- Vent clothes dryers to the outside. Don't use unvented kerosene or gas heaters.
- Repair all plumbing leaks quickly.
- Keep surfaces clean and dry to get rid of existing mold colonies and to prevent mold colonies from starting. Hard surfaces that have mold growing on them should be cleaned, disinfected, and dried.
- Don't store natural materials containing high levels of moisture, such as firewood, inside the house.
- Clean and disinfect regularly any appliance that collects or distributes water. These include dehumidifiers, humidifiers, air conditioners, and refrigerator drip pans.
- Chlorine bleach (sodium hypochlorite) is an effective, inexpensive disinfectant. Products with an EPA registration number are also reliable disinfectants and have instructions for disinfecting.

### *Cleaning and Disinfecting*

Mold is often visible. If you notice the musty smell of mold, locate the source and fix the moisture problem. Then remove the mold and clean the surface. Follow with a disinfectant. Rinse. Dry quickly. Here are points to consider for cleaning and disinfecting household surfaces for mold and mildew:

- Testing for mold type is usually not necessary unless the information is needed for health or insurance purposes. It's more important to fix the moisture problem and remove the mold. If the mold area is larger than 10 to 15 square feet, professional assistance is recommended.
- Take steps to protect your health during mold removal. Use a mask or respirator that will filter out mold spores. Usually it will be designated as an N95 or N100 particulate respirator with a NIOSH approval No. TC-21C or TC-84A. Wear eye protection, rubber gloves, and clothing that can be washed immediately. *Caution:* Breathing large amounts of dusty, moldy material in cleanup can cause a temporary "flu-like" illness with onset four to six hours after exposure.
- Remove mold from hard surfaces, such as hard plastic, glass, metal, and counter tops, by scrubbing with a non-ammonia soap or detergent. (Do not mix ammonia and bleach products; the fumes are toxic!)
- It is impossible to completely remove mold from porous surfaces such as paper, Sheetrock (drywall), and carpet padding. These materials should be removed and discarded. Dampen moldy materials before removal to minimize the number of airborne mold spores.
- Scrubbing may not completely remove mold growth on structural wood such as wall studs, so it may need to be removed by sanding. Wear protective gear and isolate the work area from the rest of the home.
- After the mold is removed, disinfect the area using a chlorine bleach and water solution or another disinfectant. The amount of bleach recommended per gallon of water varies considerably. A clean surface requires less bleach than a dirty surface. A solution of ¼ cup bleach to 1 gallon of water should be adequate for clean surfaces. The surface must remain wet for about 15 minutes to allow the solution to disinfect.
- Concentrations as high as 1½ cups of bleach per gallon of water are recommended for surfaces that cannot be thoroughly cleaned. Provide adequate ventilation and wear rubber gloves while the disinfecting process.
- Finally, rinse the entire area with clean water, and rapidly dry the surfaces. Use fans and dehumidifiers or natural ventilation that exchanges inside air with outside air.

For more information about mold and moisture in your home, contact your County Extension Agent for Family and Consumer Sciences or visit the Web site for Family and Consumer Sciences, College of Agriculture, University of Kentucky, at [www.ca.uky.edu/agcollege/fcs](http://www.ca.uky.edu/agcollege/fcs).

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August 2004

Source: Adler, Linda. *Managing Asthma Triggers in the Home*. Kentucky Cooperative Extension Service. 2003.

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