

## ◆ Mold and Moisture ◆

Molds are microscopic organisms that are found virtually everywhere—indoors and outdoors. They are an important part of the life cycle because they act to decompose organic matter. Molds grow when environmental conditions are favorable. Those conditions include: **a food source, the right temperature, and the presence of moisture.**

**The key factor to preventing indoor mold growth is moisture control-- keeping humidity levels below 65 percent (ideally between 30 and 50%).** Mold grows on organic materials, such as paper, dirt, wood, and soap scum. Mold grows on moist materials, so mold is likely in areas wet by flooding, backed-up sewers, leaky roofs, humidifiers, constant plumbing leaks, damp basements or crawl spaces, shower/bath steam and leaks, clothes dryers and combustion appliances (stove, furnace, water heater, etc.) not exhausted to the outdoors.

**Any flooded area that was not completely dried within about 1 day is likely to have mold growth.** Standing water is a breeding ground for microorganisms, such as viruses, bacteria, and mold. Even when flooding is caused by rain water, the growth of microorganisms can cause allergic reactions in sensitive individuals. Long term increases in humidity (above 55%) can also trigger the growth of dust mites, which are a major cause of allergic reactions and asthma.

**Any area that is stained from water should be examined for mold growth.** Peeling paint may be an indication of wet walls. Moisture seeping through concrete walls and floors will cause moist conditions--likely to cause mold growth on or in walls, carpeting, and materials stored in the basement. Moisture coming through a basement floor or wall may deposit light-colored salts and other minerals that are sometimes thought to be mold. To check for mold, add water to the area, and if it is a salt, it will dissolve and disappear.

**Some recommendations for removal of ongoing water problems would be the following:** put in drain tile around the inside or outside of the house, add a sump pump (or two), put a watertight cover over the sump pump, fix the gutters, fix the down spouts so they direct water away from the house, replace old shingles with new ones, add more insulation in areas that do not have enough, slope the soil away from the house, fix plumbing leaks, vent the dryer and combustion appliances outdoors, put plastic over windows that allow condensation build-up, provide enough ventilation in the attic, and put plastic down in crawl spaces and seal it to the foundation. These methods will help direct water away from the house, reduce moisture levels in the house, and reduce corrosion and other structural damage to the house.

**When mold is present in large numbers, it can cause allergic reactions, asthma episodes, infections, and other respiratory problems for people.** People can react to mold, whether it is living or dead. Some people are affected when exposed to a small number of mold spores, while others may show no adverse health symptoms when exposed to mold. **Exposure to high mold spore levels can cause development of an allergy to mold.** Children, the elderly, pregnant women, and people with existing respiratory sensitivities are at higher risk for adverse health effects from mold.

**The basic rule is: if you can smell a musty odor or see mold, you have a mold problem and need to take steps to eliminate the excess moisture and to clean-up and remove the mold.** It is most critical to remove the source of the moisture in order to prevent future mold growth. **Unless the source of moisture is found and removed and the contaminated area cleaned and disinfected, mold growth is likely to recur.** Once you know a moisture problem exists, follow these clean-up steps: (1) *Identify and fix the moisture source*, (2) *Remove the mold*, (3) *Clean, disinfect, and dry the area.*

**What do you throw out and what do you keep?** Porous materials such as paper, ceiling tile, wallboard, carpet, sheetrock, and insulation that exhibit mold growth should be discarded because they may be impossible to clean thoroughly. Harder surfaced materials such as cement, glass, plastic, metal, and counter tops can be kept after they are cleaned and disinfected. Foundation materials that are impractical to remove may need to be looked at by a building inspector for structural damage.

The important thing to remember when considering what to keep and what to discard is that the mold **MUST** be removed. Simply killing the mold may be inadequate because it does not remove the mold allergens from the environment.

**The procedure for mold clean-up and disinfecting is the following:**

- (1) Wear gloves and a mask: using soap and hot water, scrub the area that contains the mold (use a stiff brush if needed). Rinse the area following the clean-up process.
- (2) After cleaning and rinsing is complete, apply a thin layer of disinfectant to the entire area that contained the mold. Concentrations as high as 1 ½ cups of regular bleach (unscented) per gallon of water can be used, but a minimum of 1 cup of regular bleach to 1 gallon of water is recommended for mold clean-up.
- (3) Allow the area to dry on its own, but make sure the area is kept wet for 10-15 minutes to KILL the mold (the bleach may need to be reapplied if it dries too soon, such as with wood surfaces).
- (4) Following the waiting period, put fans in the room to dry out the area. Wait until the area is dry before reinstalling paneling, covering the floors, or painting.



***For additional information, contact:***

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