



Disaster Recovery



Mold Removal Guidelines For Your Flooded Home

A flood-damaged home needs special care to remove mold safely and effectively. Mold begins to grow on materials that stay wet longer than two or three days. The longer it grows, the greater the health hazard and the harder it is to control. So, as soon as it is safe to return, **don't delay cleanup and dry out.**

Take photographs before cleaning up for insurance purposes, and get started. Do not wait for the claims adjuster to see it before removing wet and moldy materials. Most homeowners' insurance policies do not cover mold damages or cleanup costs, but flood insurance may cover it.

Mold and Health

Some people are much more sensitive to mold than others, but long-term or heavy exposure is unhealthy for anyone. Mold can trigger allergic reactions and asthma attacks, may lower resistance to illness or have other effects. Young children, the elderly and the ill are most vulnerable. Some molds can make toxins that can be in live or dead spores and fragments. "Black mold" is a misleading term; many molds are black.

Mold testing is not usually needed and is rarely useful to answer health concerns. Some insurance companies and legal services may require sampling for evidence. Professional mold remediation contractors may test before and after cleanup to check the cleanup's effectiveness.

If you hire a contractor, seek a licensed mold remediation contractor with special training and equipment. Get in writing the cost, methods and steps to be used. Compare their procedures with the following guidelines.

Do-it-yourself Mold Cleanup Steps

To clean up safely and effectively, follow these steps and refer to EPA's *A Brief Guide To Mold, Moisture, and Your Home* or *Mold Remediation In Schools and Commercial Buildings* available online at www.epa.gov/mold or the CDC's *Mold Prevention Strategies and Possible Health Effects in the Aftermath of Hurricanes Katrina and Rita* available online at www.bt.cdc.gov/disasters/mold/report/.

1. Wear Protective Gear during Cleanup:

People are mainly exposed to mold by breathing spores and skin contact. Wear gloves, goggles and a respirator rated N-95 or higher. Some types have valves to make it easier to breathe.

2. Isolate Work Area and Ventilate to

Outdoors: Disturbing mold colonies during cleanup can cause a huge release of spores into the air, so seal off the moldy areas from the rest of the house. Open windows, and don't run the central air system during cleanup. Tape plastic over air grilles, and drape plastic in the stairwell if the second story is dry and clean. If power is on, put a fan in a window to blow out and exhaust mold-filled air to the outdoors.

3. Remove Moldy Porous Materials: Porous moldy or sewage-contaminated materials should be removed, put in plastic bags if possible and thrown away. To reduce the release and spread of mold spores, it is helpful to cover moldy material with plastic sheeting before removing it.

- Remove all flooded carpeting, upholstery, fabrics and mattresses right away. It's best to discard them, but if you hope to salvage a valuable item, have it cleaned, disinfected

and dried quickly outside the home. Never reuse flooded padding.

- Remove all wet fibrous insulation – even if wallboard appears to dry. Wet insulation will stay wet far too long, leading to the growth of hidden unhealthy mold and decay fungi inside the walls. Cut wall covering above the level that was wet; water can wick up above the flood level.
- It's best to remove all moldy, porous materials, especially if there is heavy or long-term mold growth -- including gypsum wallboard, processed wood products, ceiling tiles and paper products.
- Plaster, wood paneling and non-paper faced gypsum board walls that dried, are in good condition and have no insulation in the wall can be cleaned and sanitized to salvage them. There is a risk of mold on the backside, however, that can release spores into the home through air leaks in the walls.
- Remove vinyl wallpaper, flooring and other coverings of wet materials.

4. Clean and Disinfect: Surface mold can be effectively cleaned from non-porous materials such as hard plastic, concrete, glass and metal; solid wood can be cleaned. Cleaning should remove, not just kill, the mold, because dead spores can still cause health problems.

After cleaning, you may use a disinfectant to kill any mold missed by the cleaning. If there was sewage contamination, disinfection is a must. If you disinfect, follow label directions and warnings, handle carefully and never mix bleach with ammonia or acids. Many disinfectants kill molds, but do not prevent regrowth.

- Remove any sediment. Hose out opened wall cavities.
- Wash dirty or moldy materials with non-phosphate all-purpose cleaners, because phosphate residue is mold food. Rough surfaces may need to be scrubbed. Rinse, but avoid pressure spray that can force water into materials.

- Disinfect wall cavities and other materials after cleaning. Soil can make some disinfectants less effective. On colorfast, non-metal surfaces, you can disinfect with a solution of 1/2 - 1 cup household chlorine bleach per gallon of water. Do not use in the air conditioning system. Milder, less corrosive disinfectants include alcohols, phenolics and hydrogen peroxide.

5. Consider Borate Treatment: Having a professional pest control applicator apply a borate treatment to wood framing can provide resistance to termites, decay and mold. Other fungicides may also help inhibit mold regrowth during drying. Do NOT apply sealants to wood.

6. Flush the Air: After cleaning and disinfecting, air out the building. Use fans in windows to pull mold spores to the outdoors.

7. Speed Dry: Dry all wet materials as quickly as possible. Close windows and air condition or heat, run fans and use a dehumidifier, if possible. If there is no power, keep windows open.

8. Remain on Mold Alert: Continue looking for signs of moisture or new mold growth. New mold can form in as little as 2-3 days if materials stay wet. Wood and other materials that may look dry can still be wet enough to support regrowth. If mold returns, repeat cleaning and, if possible, use speed drying equipment and moisture meters. Regrowth may signal that the material was not dry enough or should be removed.

9. Do Not Restore until All Materials Have Dried Completely. Wood moisture content should be less than 20%. Do NOT use vinyl wallpaper, oil-based paint or other interior finishes that block drying to the inside.

For more information, see *Storm Recovery Guide for Homeowners* booklet or *Cleaning Your Flood Damage Home* fact sheet available from LSU AgCenter's Extension offices and Web site.

Developed by
Claudette Hanks Reichel, Ed.D.
Professor and Extension Housing Specialist

Visit our Web site: www.lsuagcenter.com

Louisiana State University Agricultural Center, William B. Richardson, Chancellor
Louisiana Agricultural Experiment Station, David Boethel, Vice Chancellor and Director
Louisiana Cooperative Extension Service, Paul Coreil, Vice Chancellor and Director

Issued in furtherance of Cooperative Extension work, Acts of Congress of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture. The Louisiana Cooperative Extension Service provides equal opportunities in programs and employment