



Mold Prevention and Removal Steps for a Flooded Home

After a flood, mold colonies can start to grow within 2-3 days. So the key to preventing mold is to act fast to get things clean and dry. To prevent mold growth after flooding:

- **Remove wet carpeting and pads right away**, as well as wet draperies and upholstery.
- **Cut into wallboard and remove all wet and damp insulation right away** – 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.
- **WARNING!** If your home was built before 1978, it could contain lead based paint and asbestos materials. Disturbing such materials can create dangerous health hazards. Before you do that, learn more at www.epa.gov/lead and www.epa.gov/asbestos, wear protective gear and use safe work practices.
- **Clean with non-phosphate detergents** (any phosphate residue is mold food). If you disinfect, follow directions carefully and never mix bleach with ammonia or acids (vinegar). Disinfectants can kill molds, but do not prevent new growth on damp materials.
- Do all you can to **speed the drying** of subfloors, slabs and wall framing before replacing insulation, wallboard and flooring. Use air conditioning or heaters, fans, and better yet, a dehumidifier. Water damage restoration contractors with special equipment (dehumidifying blowers) can provide the fastest drying.
- **Test the moisture content** of studs and sheathing (using a reliable moisture meter) before replacing insulation. Before you close the wall, wood should drop at least below 20% moisture content to prevent decay, and preferably below 16% to prevent mold growth.
- **Do NOT use vinyl wallpaper.** That would prevent further drying to the inside.

Mold Clean-up Guidelines: To clean up mold, follow these steps and refer to more detailed information available online at www.epa.gov/mold .

Minimize Your Exposure During Clean-up: People are mainly exposed to mold by breathing spores or fragments, and can also be exposed through skin contact. Wearing gloves and a respirator that can filter mold spores (N-95 or better) is recommended.

Isolate Work Area and Ventilate to Outdoors: Disturbing mold colonies can cause a massive release of spores, so seal off the contaminated area from the rest of the house. If power is on, use a fan to exhaust air to the outdoors.

Remove And Discard Moldy Materials: Porous moldy or sewage contaminated materials should be removed, bagged and thrown away -- including gypsum wallboard, insulation, plaster, carpet/carpet pad, ceiling tiles, processed wood products and paper. To minimize the spread of spores, cover moldy material with plastic to contain spores before removing and discard it. Even if not moldy, **all wet fibrous insulation and other materials that are unlikely to dry quickly should be removed and replaced.**

Clean Surfaces: Surface mold on non-porous materials such as hard plastic, concrete, glass, metal and solid wood can usually be cleaned. Cleaning must remove, not just kill, the mold because dead spores can still cause health problems.

After cleaning, you may choose to use a disinfectant to kill any mold missed by the cleaning, but it is not a substitute for cleaning. In the case of sewage contamination (including floodwater), disinfection is recommended. On color-fast, non-metal surfaces, you may disinfect with a solution of 1/4 to 1/2 cup bleach per gallon of water. Do not use in the air system. Milder, less corrosive disinfectants include alcohols, disinfecting cleaners and hydrogen peroxide. Always handle with caution, never mix bleach with ammonia and test on a small area.

Consider borate treating wood: While walls and subfloors are exposed is a great time to treat them with a penetrating borate solution to provide safe protection from termites and decay. The coating may also help to deter mold growth during the drying time.

Speed Dry: Dry all wet materials as quickly as possible. Use air conditioning or heat with fans and dehumidifiers, if possible. New mold colonies can form in as little as three days if materials stay wet. Wood and other materials that look dry can still be wet enough to support regrowth.

Remain on Mold Alert: Continue looking for signs of moisture or new mold growth. If mold returns, repeat cleaning and consider using speed drying equipment and moisture meters. Regrowth may signal that the material was not dry enough or should be removed. Rebuilding should wait until all affected materials have dried completely.

Do More Than Restore: You can reduce future damage and ordeal by restoring your home with flood resistant materials and elevating equipment where possible. Consider ceramic or solid vinyl tile flooring and wall assemblies that can be washed and dried with solid wood studs, plywood (no OSB), closed cell foam insulation, and paperless drywall with latex paint or removable wainscoting.

Adapted from: See and learn more about hazard resistant housing at www.LSUAgCenter.com/LaHouse and by visiting LaHouse Home and Landscape Resource Center in Baton Rouge. Find more storm recovery publications at www.LSUAgCenter.com, including *Mold Removal Guidelines for Your Flooded Home*. For a detailed “how-to” guide, see HUD’s *Rebuild Healthy Homes: Guide to Post-disaster Restoration for a Safe and Healthy Home*, a free online publication and mobile app from HUD.