

STOP MOLD

by Bruce Clark



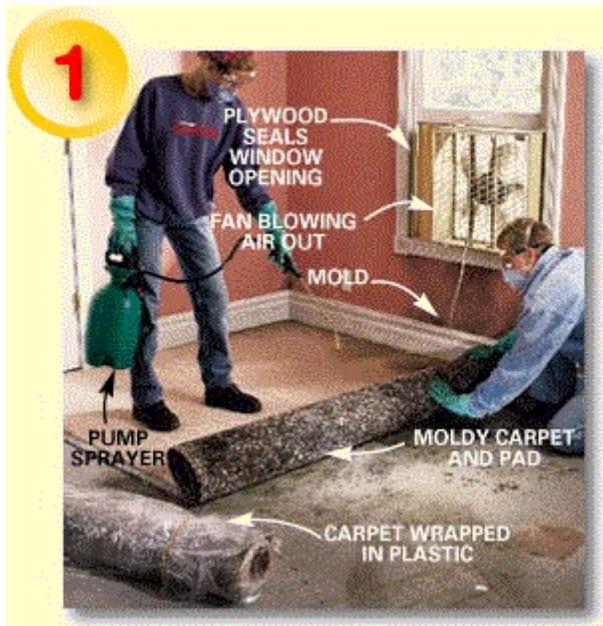
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If left unchecked, a major mold infestation can ruin your home - and your health! Here's how to get rid of it.

Mold is a major-league nuisance. It blackens the grout lines in your shower, discolors drywall, shows up as black spots on siding, darkens decks, and grows on and rots damp wood everywhere. Even worse, it can be bad for your health. It releases microscopic spores that cause allergic reactions, runny noses and sneezing, as well as irritating, even injurious, odors.

Almost every home gets mold infestations. The trick is to stop them before they get big and harm both you and your home. In this article, we'll show you how to identify mold and eliminate the small infestations as well as the big ones that have gotten out of hand. You can easily remove minor mold with ordinary household cleaning products (see Techniques For Cleaning Surface Mold). But disturbing big infestations can be bad for your health, particularly if you are an allergy sufferer or have a weakened immune system. When you discover an extensive mold problem, we recommend that you use the rigorous protective measures we show in Photos 1 - 6, or consider calling in a professional to handle the problem. (Look under "Industrial Hygiene Consultants" or

"Environmental and Ecological Consultants" in your Yellow Pages. Or call your local public health department.) And even if you hire pros, read through this article and make sure they follow similar precautions to keep the mold from spreading throughout your house.



HOW TO IDENTIFY MOLD

Mold is everywhere. It's a type of fungus that grows from tiny spores that float in the air. It can grow almost anywhere that spores land and find moisture and a comfortable temperature, between 40 and 100 degrees F. Typically that includes about every damp place in your home.

1. CUT stained or musty carpet and pads into 6 x 8-ft. sections with a utility knife. Using a pump sprayer, mist the surfaces with water to control the spread of spores, and roll up the sections. Double-wrap them in 6-mil plastic and tape them with duct tape for disposal. Wear protective clothing (see text) and run an exhaust fan in the window.

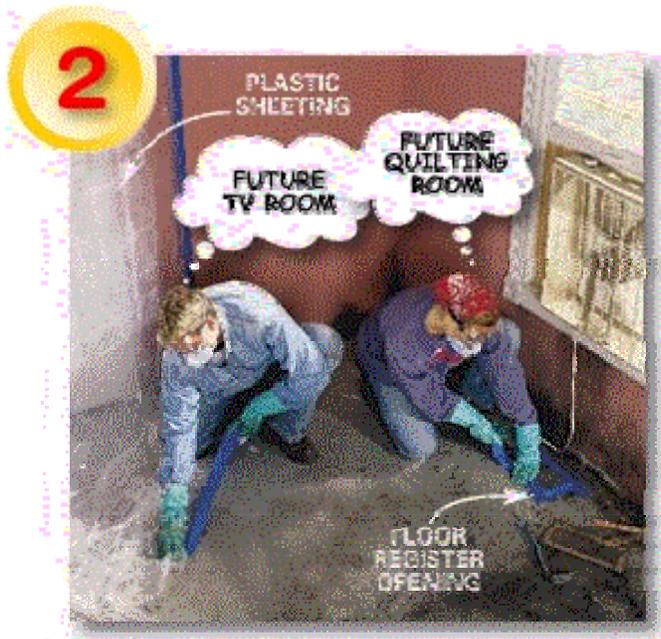
You can easily spot the most visible type of mold, called mildew, which begins as tiny, usually black spots but often grows into larger colonies. It's the black stuff you see in the grout lines in your shower, on damp walls, and outdoors on the surfaces of deck boards and painted siding, especially in damp and shady areas. A mildewed surface is often difficult to distinguish from a dirty one. To test for mildew, simply dab a few drops of household bleach on the blackened area. If it lightens after one to two minutes, you have mildew. If the area remains dark, you probably have dirt.

Mildew is a surface type of mold that won't damage your home's structure. But other types of mold cause rot. Probe the suspect area with a screwdriver or other sharp tool (Photo 3). If the wood is soft or crumbles, the fungi have taken hold and rot has begun.

If you have a high concentration of mold, you may smell it. If you detect the typical musty odor, check for mold on damp carpets, damp walls, damp crawlspaces and wet

wood under your floors, wet roof sheathing and other damp areas. Clean up these infestations right away before they get worse, and below for prevention measures.

CAUTION: A FEW TYPES OF MOLD ARE HIGHLY TOXIC. IF YOU HAVE AN ALLERGIC REACTION TO MOLD OR A HEAVY INFESTATION INSIDE YOUR HOME, CALL IN A PRO TO ANALYZE THE TYPES. OR CALL YOUR LOCAL PUBLIC HEALTH DEPARTMENT AND ASK FOR MOLD-TESTING ADVICE.



2. Seal the room from the rest of the house. Cover the doorway with a barrier made of overlapping plastic sheeting and tape it to the wall and floor. Cover all air ducts in the room with plastic and tape.

TIPS FOR MOLD PREVENTION

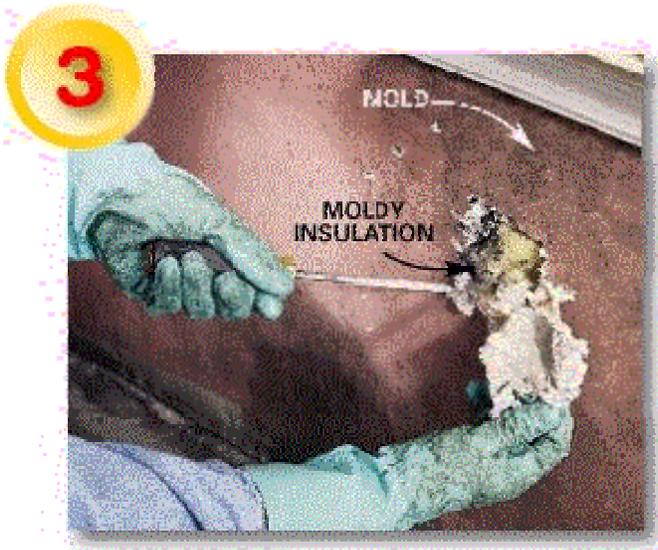
The key to stopping most mold is to control dampness. The worst infestations usually occur in damp crawlspaces, in attics and walls where water has leaked in from the outside, and in basements with poor foundation drainage. Stopping leaks, ensuring good ventilation in attics, keeping crawlspaces dry and routing water away from the foundation are the best defenses.

Mildewcide in paint is usually effective for controlling surface mold in damp rooms like bathrooms and outside in shady areas. Many paints already have mildewcide in them. Check with your paint dealer to be sure. You can add mildewcide, although you might void the paint warranty.

REMOVING LARGE INFESTATIONS REQUIRES PRECAUTIONS—AND WORK!

You can scrub away the surface mold common to bathrooms, decks and siding in a matter of minutes with a 1-to-8 bleach/water solution. (See below for techniques.) But often mold grows and spreads in places you don't notice, until you spot surface staining, feel mushy drywall or detect that musty smell. If you have to remove mold concentrations covering more than a few square feet, where the musty odor is strong or where you find extensive water damage, we recommend that you take special precautions. You want to not only avoid contaminating the rest of the house but also protect yourself from breathing high concentrations of spores and VOCs.

- Wear old clothes and shoes that you can launder or throw away after the cleanup work.
- Wear special N-95 or P-100 respirators, in addition to goggles and gloves. See the Buyer's Guide for a source.
- Set an old box fan or a cheap new one in a window to ventilate the room while working. Throw it out when you're done cleaning, because the spores are almost impossible to clean off. Tape plywood or cardboard around the window openings so the spores can't blow back in (Photo 1).

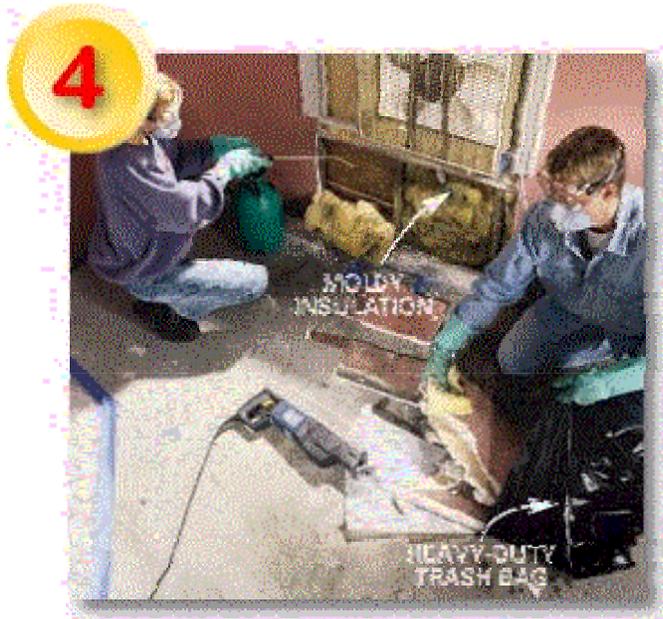


3. PRY OFF baseboards and trim from contaminated areas with a pry bar and block of wood. Probe heavily stained or moisture-swollen walls using a screwdriver to discover and open up moisture damage and hidden mold in the insulation and wall framing.

- Wrap and tape moldy carpeting in 6-mil plastic, and double-bag mold-infested debris in garbage bags for disposal (Photos 1 and 4).
- To control airborne spores, moisten moldy areas with a garden sprayer while you work (Photo 1).
- Turn off your furnace and air conditioner and cover ducts and doors to contain spores.
- Keep your wet/dry vacuum outside when you vacuum (Photo 5).

Moisture damage and large mold infestations go hand in hand. Photos 1 - 7 demonstrate cleaning under an old leaky window where wind-driven rain frequently got into the wall and gave mold a foothold.

You have to open up the wall to get at the mold growing inside (Photo 4). Since you have to repair the wall anyway, don't hesitate to cut the drywall back beyond the obvious damage to find all the mold and let the wall dry out. To avoid cutting electrical wires, poke a hole through the damaged section and locate the wires first. Turn off the power to the outlets before you cut.



4. TURN off the electrical power to the room and cut open the damaged wall with a reciprocating saw, drywall saw or utility knife. Mist the moldy drywall and insulation with the pump sprayer to avoid spreading mold spores. Double-bag moldy material in heavy-duty plastic bags and tie them shut.

If the moisture damage has been neglected or gone unnoticed for long, you're likely to find rot. Where possible, remove and replace soft, spongy studs and wall sheathing. Where removal is difficult, treat the affected areas with a wood preservative (available at home centers), after cleaning the wood and allowing it to dry. Then double up rotted members with pressure-treated wood.

Complete the initial cleanup by vacuuming up the debris (Photo 5). Thoroughly clean the wet/ dry vac afterward by disposing of the filter and washing out the tank, hose and attachments with the bleach-and-water solution.

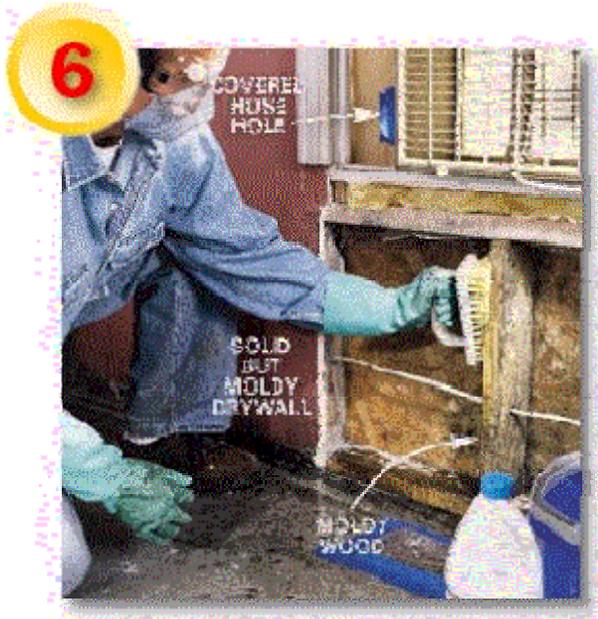
After scrubbing the surfaces (Photo 6), simply allow the bleach solution to continue to penetrate the surfaces and dry. Wash concrete floors with TSP, automatic dishwasher detergent or a chlorinated cleaner such as Comet.



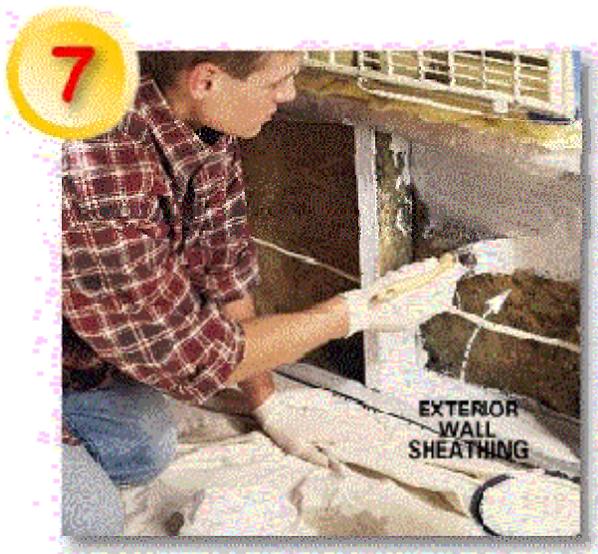
5. Vacuum up moldy debris with a standard wet/dry vacuum. Buy an extra length of hose and run it out the window so you can keep the vacuum outside to avoid further spore spread.

Set out dehumidifiers and new fans to dry the now-cleaned areas for at least three days, then check them (by sight and smell) for mold. If you discover more mold, clean again with bleach.

When you're sure the mold has been eliminated, seal the wood surfaces with pigmented shellac like BIN or an oil-based primer like KILZ (Photo 7). Repaint cleaned wall surfaces with a regular latex paint that contains a mildewcide to help stop future mold growth. And keep in mind that if the moisture returns, mold will return.

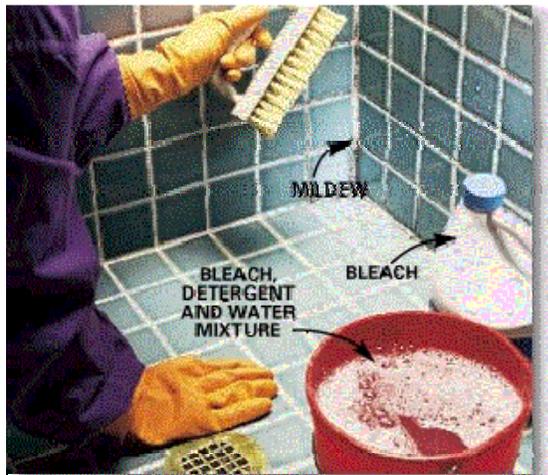


6. SCRUB the surface mold stains from walls and wood trim with a mixture of 1 qt. water and 1/2 cup bleach to kill the mold. Use a soft brush and work until signs of the mold disappear. Wipe off, but DO NOT RINSE these surfaces. Set trim in direct sunlight to dry. Scrub concrete with TSP or automatic dishwasher detergent.



7. Allow to dry, then seal all previously infested areas with a pigmented shellac- or oil-based primer. Then install new insulation and drywall and nail the trim back on.

Techniques for cleaning surface mold



Surface molds grow in just about any damp location, such as the grout lines of a ceramic tiled shower (see photo). They're easy to scrub away with a mixture of 1/2 cup bleach, 1 qt. water and a little detergent. The bleach in the cleaning mixture kills the mold, and the detergent helps lift it off the surface so you can rinse it away so it won't return as fast. You can also buy a mildew cleaner at hardware stores, paint stores and most home centers.

Even for simple cleaning, protect yourself from contact with mold and the bleach solution by wearing a long-sleeve shirt and long pants as well as plastic or rubber gloves and goggles.

Tip: Special gloves made of nitrile are as tough as latex but thinner and more protective. See the Buyer's Guide for a source.

If the mold doesn't disappear after light scrubbing, reapply the cleaning mix and let it sit for a minute or two. Then lightly scrub again.

Seal the clean surfaces when they're thoroughly dry to slow future moisture penetration. Apply a grout sealer (\$5 to \$25 per quart from tile shops and home centers) to tile joints.

Caution: Don't mix ammonia or any detergent containing ammonia with bleach. The combination forms a poisonous gas.

For More Information

"How A House Works," "Combating Mold and Mildew," March '00, p. 89

For more information on how to order back issues, copies of articles or the Five-Year Index, see p. 116.

Buyer's Guide

For local sources of safety gear, see "Safety Equipment and Clothing" in your Yellow Pages.

Direct Safety Inc.: (800) 528-7405. www.directsafety.com. Source for N-95 particulate respirator masks (item No. 03-017, about \$24 for box of 10), unlined 13-in. nitrile gloves (item No. 07-121, about \$2 a pair) and anti-fog goggles (item No. 02-709, about \$4).

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