Maintaining the Home:

Dealing with Mold

Maintaining the Home:
Dealing with Mold

Mold needs two things to grow: a food source and moisture. These conditions can be found in many areas of the home including the building itself. Wet materials such as paper products, cardboard, ceiling tiles, wood and wood products are great spots for some mold growth. Mold also can grow in or on dust, paints, wallpaper, insulation materials, drywall, carpet, fabric and upholstery.

Mold growth is almost always caused by excess moisture. Aside from flooding, moisture for mold comes from water leaks in plumbing, seepage through basement walls or foundation slabs and condensation. Solving the moisture problem will stop the mold growth. However, you will need to clean up existing mold.

Home Self-Inspection

Doing your own inspection is usually enough to find mold problems if they exist. Use the Home Self-Inspection Checklist to help you determine if your home has mold problems or conditions for mold growth. Completing the checklist can be the first step in helping you solve a mold problem in your home. The items on the checklist are suggested by the U.S. Environmental Protection Agency (EPA). The checklist gives you questions to ask yourself about the feel of your home, the appliances and furnishings, and the conditions of household systems and the structure of the house itself. Make copies of this checklist – it is not copyrighted. Run through the checklist each season of the year, since not all moisture problems occur at the same time.

The first part of the checklist considers the overall feel of the home. If you smell a musty odor or see mold, you have a problem. The sense of smell decreases rapidly, so it is best to smell for mold after being away from the suspect areas for a while. A high humidity level can provide moisture for mold through condensation, which forms when humid air touches a cooler surface. This is easily seen in winter when the water vapor in warm, humid air condenses on windows cooled by low outside temperatures.

To detect mold, inspect some easily overlooked things, such as the refrigerator and dehumidifier drip pans. Check the filter, coils and drip line of room air conditioners and make sure the water in humidifier reservoirs is clean and changed frequently. If you have a carpeted basement, check to see if it is damp or water stained. Also, make sure that any furnishings – especially upholstered items – have not become damp.

Evaporative coolers, often called swamp coolers, can encourage mold growth since they add humidity to indoor air. Stagnant water in drip pans and wood fiber in filter pads can encourage mold growth. The American Lung Association recommends using central air conditioning and avoiding evaporative coolers.

If you have a refrigerated air system, it should be inspected as should a central heating system. If your home does not have a central heating system, know that unvented space heaters add moisture to indoor air. They also can cause carbon monoxide

poisoning. For safety, vent them to the outside.

Laundry rooms, bathrooms and kitchens should all be vented to the outside since washing, bathing and cooking all put moisture into the air. Attics and crawlspaces need to be vented. These are great places for moisture and mold. Closets that have an outside wall can collect condensation easily and provide hiding places for mold.

During your inspection, look for moisture around windows and on walls and ceilings. Look for water damage in those areas as well as the roof and basement. Signs of moisture problems include swelling wood and wallboard, stains, rust and bubbling paint. Laundry rooms, bathrooms and kitchens also should be checked for plumbing leaks. Basements should be checked for water seepage as well as plumbing leaks. Also look at the items stored there for water damage or mold.

To help prevent mold from getting the moisture it needs, lower the household humidity level. When outside air is drier than inside air, open doors and windows to increase ventilation and help dry out the house. When outdoor air is too hot, humid or dusty, use air conditioners and dehumidifiers.

Dehumidifiers can help lower humidity in rooms or certain areas of the house but generally they are not effective for lowering humidity levels in the whole house. Room-size air conditioners also can help remove moisture from a room or a limited amount of space. Central air conditioning is needed to lower humidity levels throughout the house. Refrigerated air conditioners must be properly sized to lower both temperature and humidity levels.

In bathrooms, kitchens and laundry rooms, use exhaust fans that vent moisture to the outside. If these rooms are not equipped with an exhaust fan, open a window to help reduce humidity. Other steps that can be taken include increasing air circulation in the home by opening closet doors and moving furniture away from walls.

In basements, replace carpet with hard surface flooring and insulate pipes and equipment to eliminate condensation points. Improper drainage around foundations can cause seepage in basements and crawlspaces. Some problems can be solved by installing properly functioning gutters and downspouts, and by sloping earth away from the house. More severe problems may require installing drain tile systems, pumps or waterproofing basement walls and floors.

Mold Clean-up

The EPA recommends that you deal with mold yourself only if the moldy area is less than about 10 square feet. For large-scale mold problems, you may want to hire a qualified professional mold removal contractor. Also, serious mold contamination in heating ducts or other household systems may require mold removal experts.

For your health and safety, follow the suggestions in the EPA booklet, "A Brief Guide to Mold, Moisture and Your Home" which is available on the Web at http://www.epa.gov/iaq/molds/moldguide.html.

Avoid breathing in mold and mold spores when doing mold clean-up. Some people react negatively to mold, so use a respirator or breathing mask to filter out the mold spores and debris, wear eye protection and use rubber gloves. Recommended items are an N-95 respirator and goggles that do not have ventilation holes. If using only a mild detergent and water for clean-up, you can use household rubber gloves. If you will be using a strong cleaning solution or biocide, such as chlorine bleach, use long gloves that extend to mid-forearm. These should be made of neoprene, natural rubber or PVC. These items are available at many hardware and home improvement stores.

If carpeting or other furnishings become wet, they must be dried very quickly and thoroughly to prevent mold growth. Textiles should be cleaned in accordance with label directions. Textiles that have been wet for several days usually cannot be saved. Moldy items that cannot be cleaned readily should be thrown away.

Cleaning wood is difficult and presents a number of problems. You can get fact sheets on wood clean-up from the Western Wood Products Association Web site at www.wwpa.org.

Keeping surfaces clean and dry is the most effective way to prevent mold. In particular, bathroom surfaces and fixtures should be cleaned to remove soap scum and body oils. Surfaces in kitchens need to be cleaned to remove cooking residue, especially grease. Hard surfaces with mold growing on them should be cleaned with a disinfectant.

The EPA is unclear about using bleach for mold clean up. If you plan to clean with bleach, use about 1 cup of chlorine bleach per gallon of water and allow to dry after cleaning. Warning: Never mix chlorine bleach with ammonia or any product that contains ammonia. It produces chlorine gas that is toxic and can be fatal.

References:

Controlling mold growth in the home. (1995). Kansas State University: Kansas State University Agricultural Experiment Station and Cooperative Extension Service.

O'Brien, D. (2003). Mold at home. New Mexico State University: New Mexico State University Cooperative Extension Home Economics.

This resource is one in a series on Maintaining the Home which include:

Interior Maintenance

Preventive Home Maintenance Checkup

Make a Basic Toolkit for Simple Home Repairs

Selection and Use of Home Cleaning Products

Discovering the Secrets of Successful Storage

Heating

- Furnace Care
- Fireplace and Chimney Care

Cooling

- Evaporative Cooler
- Air Conditioner
- Ceiling Fans

Plumbing

- Fixing Plugged Sink Drains
- How to Unclog a Toilet
- Repairing Dripping Faucets

Electrical

- How to Set or Reset a Circuit Breaker
- How to Replace a Fuse

Appliances

- How to Buy an Energy Efficient Home Appliance
- Choosing a Water Heater
- **Maintenance:**
  - Dishwasher Care and Dishwasher Cleaning
  - Dryer Care and Dryer Cleaning
  - Freezer Care and Freezer Cleaning
  - Garbage Disposal Care and Cleaning
  - Range and Oven Care and Range Cleaning
  - Refrigerator Care and Refrigerator Cleaning
  - Small Electrical Appliance Care and Cleaning
  - Washer Care and Cleaning

Flooring

- Buying new carpet
- Carpet Care and Cleaning
- Wood Floors Care and Cleaning
- Ceramic Tile Floors Care and Cleaning
- Vinyl Floor Coverings Care and Cleaning

Walls

- Selecting and Applying Paint
- Wallpaper Selection and Cleaning
- Repairing Walls

Furniture

- Furnishing Your New Home: Color and Design
- Selecting Fabric For Home Furnishings

Exterior Maintenance

Home Exterior

- Foundations, Basements and Yards
- Exterior Walls, Windows, and Doors

Roof

- A Guide To Roofs
- Roof Maintenance

Landscaping and Lawn Care

- Principles of Xeriscape
- Watering Your Lawn

Home Safety

Child-Proofing Your Home

Is Your Home Safe From Fire Hazards?

Smoke Alarms Save Lives

Carbon Monoxide Alarms

Are Your Children Safe From Poisons?

Protecting Yourself Against Burglary

Conservation

Weatherize Your Home

Easy Tips to Save Money and the Planet

How to Stop Air Leaks Around Windows

Energy-Efficient Heating and Cooling

Indoor Water Conservation Tips

Outdoor Water Conservation Tips

Environment Issues

Green Building

Reduce-Reuse-Recycle: Alternatives for Waste Management

Create a home recycling center

Healthy Indoor Air for New Mexico Homes

Dealing with Mold

Household Hazardous Waste

Hazardous Household Substances: Alternatives That Are Relatively Free of Toxic Effects

Radon

Pest Control

Cockroaches and Their Control

Southwest Insects

Accessible Living

Update your home for a lifetime of living

Vision Loss & Hearing Loss

Hand Dexterity, Strength and Range of Motion

Cognitive Difficulties

Mobility Impairments, Balance and Coordination

Sponsored by New Mexico State University and the City of Las Cruces. Supported by U.S. Department of Housing and Urban Development. New Mexico State University is an equal opportunity/affirmative action employer and educator. NMSU and the U.S. Department of Agriculture cooperating.

Maintaining the Home: Dealing with Mold