

PROTECTING YOUR HOME FROM MOLD

JUNE 2002

Mold growth problems can adversely affect many homeowners in Texas. Homeowners who act quickly and appropriately can prevent or correct conditions that may cause mold growth. The Texas Department of Health (TDH) and Texas Department of Insurance (TDI) prepared this publication to help you understand the concerns related to mold growth and to provide some effective steps you can take to help prevent mold growth. The following information will help protect your investment in your home and may prevent the possibility of health risks due to mold exposure.

If you are a renter, you should contact your landlord or property manager immediately when you have a maintenance need related to water damage.

WHAT ARE MOLDS?

Molds are microscopic organisms commonly found both indoors and outdoors. Molds, along with mushrooms and yeast, are known scientifically as fungi. Their purpose in nature is to break down dead material and recycle nutrients in the environment. For molds to grow and reproduce, they need a food source - any organic material, such as leaves, wood, paper, or dirt - and moisture. Since molds grow by "eating" the organic material, they gradually destroy whatever they are feeding on. Mold growth on surfaces can often be seen as a colored spot, frequently green, gray, brown, black or white. It commonly appears as a powdery, fuzzy, or hair-like material. Actively growing molds typically produce odors, sometimes described as earthy or moldy, or like mildew, old dirty socks, or ammonia. Molds release thousands of microscopic spores, which are lightweight, easily airborne and carried by air currents to surrounding areas. The spores must have both food and moisture to actually start growing, similar to plant seeds.

WHAT DO I DO IF A LEAK OCCURS?

Whether or not the water damage may be covered by your insurance policy, it is important to act quickly to prevent further damage to your home.

- Immediately stop the source of leak or flooding.
- Remove excess water with mops or a wet vacuum. If the damage is significant, consider contacting a water extraction company for immediate action.
- Whenever possible, move wet items to a secure, dry and well-ventilated area or outside to expedite drying.
- Protect repairable and undamaged items from further damage.
- Move rugs and pull up areas of wet carpet as soon as possible.
- Increase circulation in and around wet areas by opening closet and cabinet doors, moving furniture away from walls and running fans.
- If necessary, remove wallboard and flooring materials to dry out those areas.
- Don't throw away removed or damaged materials until instructed by your insurance company.
- Dry any damp or wet building materials and furnishings within 24-48 hours.
- Keep all receipts, photos and other relevant documents.
- Contact your insurance company, if applicable.

NOTE: The sooner the affected areas dry out and the source of the leak is repaired, the better your chances of minimizing damage to your property. If the water cannot be removed and the area dried promptly and efficiently, consider contacting a water extraction company for immediate action.

RESOURCES

For additional information, consult the mold and/or indoor air quality resources at the following:

Texas Department of Health
www.tdh.state.tx.us/beh/iaq/
1-800-572-5548

U.S. Environmental Protection Agency
www.epa.gov/iaq/
1-800-438-4318

Texas Department of Insurance
www.tdi.state.tx.us/commish/mold.html
1-800-252-3439

WHY ARE MOLDS A CONCERN?

Damage to the Home

It is common to find mold spores in the air inside homes, and on most surfaces including clothes, walls, and furniture. Most of the time mold spores found indoors come from outdoor sources. Routine cleaning of your home and furnishings helps keep these levels low. Cleaning small areas of visible mold, such as mold that may occur around your shower, is necessary to prevent unsanitary conditions.

The level of concern greatly increases when there are large amounts of *active* mold growth in your home. Large-scale mold problems are most likely to occur when there has been an on-going water leak, a flood, or very high levels of humidity in the home. Indoor mold growth may cause very high levels of airborne mold spores, which, in turn, may cause the spread of mold growth from the original source to other areas of the home where high moisture levels exist. Extensive mold growth can damage your home and belongings, such as carpets, sofas and cabinets. In time, unchecked mold growth can cause damage to the structural elements in your home. While there is no practical way to eliminate *all* mold and mold spores in the indoor environment, keeping your home clean and dry can prevent extensive mold growth and its related damage.

Health Effects

The vast majority of people are exposed to small amounts of mold or their spores on a daily basis without evident harm. However, mold growing inside a home is an unsanitary condition that may present potential health risks to occupants. Therefore, it is always best to identify and correct high moisture conditions quickly *before* mold grows and possible health problems develop.

Potential health effects produced by molds may include allergic, irritating, or toxigenic effects, and rarely, infection. Allergic reactions are generally the most common health effect. Typical symptoms (alone or in combination) reported by people living in moldy homes include:

- respiratory problems, such as wheezing, difficulty breathing, and shortness of breath
- sneezing and/or nasal congestion
- eye irritation (itching, burning, watery, or reddened eyes)
- coughing or throat irritation
- skin rashes or irritation
- headaches
- fatigue

The potential health effects depend on the amounts and types of mold present, the length and frequency of exposure, and the sensitivity and health condition of exposed individuals. While many people seldom experience ill effects from mold exposures, some may develop very serious illnesses. Some persons exposed to mold or mold spores may become sensitized and develop allergies to the mold or other health problems. Even "dead" mold (including spores and pieces of mold) may still cause allergy, irritation, or toxigenic reactions. Thus, killing mold without removing the residue may still be a health concern. Complete removal and thorough cleanup of mold is the safest solution.

Individuals at greater risk who may experience more severe symptoms or become ill more rapidly than others include:

- individuals with existing respiratory conditions, such as allergies, asthma, or chemical sensitivities
- individuals with weakened immune systems due to conditions such as HIV infection or cancer treatment
- infants and young children
- the elderly

Anyone with a health problem they believe may be due to mold exposure should consult a medical professional.

Since you cannot remove all food sources for molds, it is important as a homeowner to take sensible precautions to prevent moisture from creating a breeding ground for mold.

MOISTURE CONTROL

- Maintain levels of humidity below 60% (preferably between 30% and 50%) by
 - venting bathrooms, dryers and other moisture-generating sources to the outside
 - avoiding blockage of air conditioning vents
 - using air conditioners and de-humidifiers
 - increasing ventilation by installing additional crawlspace and attic vents, opening windows or installing an air-to-air heat exchanger
 - using exhaust fans when cooking, dishwashing and cleaning
 - avoiding the use of unvented heaters or high heat in confined areas
 - setting the air conditioning thermostat to "auto" to prevent circulation of humid air.
- Add insulation to reduce the potential for condensation on cold surfaces (windows, piping, exterior walls, roof or floors).
- Consider using moisture sensors that sound an audible alarm when a leak occurs.

OTHER PRECAUTIONS

- **Water Valve** - Make sure everyone in the household knows where the main valve is located and how to turn the water off.
- **Rain Gutters and Downspouts** - Direct rainwater away from your home. Keep gutters clear and make sure downspouts are long enough to effectively carry water away from your foundation. Gutters that are filled with leaves and other debris allow water to back up on the roof, which can result in water damage to eaves and roofing material.
- **Insulate Pipes and Outside Faucets** - Minimize the potential for water damage from frozen, broken pipes by insulating supply lines (in attic, crawlspaces and exterior walls), protecting exposed outdoor faucets, sealing gaps in exterior walls and maintaining adequate heat in your home.
- **Sump Pump** - The sump pump is the first line of defense in preventing water seepage into basements. Periodically check the sump and remove any debris that could clog the pump. Consider installing a battery-powered backup to protect your basement during power outages.
- **Don't block weep holes** - Weep holes are openings at the foundation level of a brick wall that allow moisture to escape from behind the wall. Do not close or block these openings.
- **Monitor Utility Bills** - An abnormally high water bill could signal a water leak.
- **Before You Travel** - Turn the water off at the main valve or at major appliances. While you are away, consider leaving a house key and contact information with a neighbor or trusted friend and ask the person to check the inside and outside of your home periodically while you are away.

PREVENTION

- Purchase paint with EPA approved mold inhibitors
- Clean bathrooms often with mold killing products and keep surfaces dry
- Do not carpet bathrooms, basements, kitchens or other areas prone to collect moisture
- Repair damages that could lead to water intrusion promptly and properly
- Ensure that the home has adequate ventilation, including exhaust fans in the kitchen and bathrooms

INSPECTION

Inspect your home regularly for the indications and sources of indoor moisture. Establish a maintenance schedule to check the following sources of water leaks on a regular basis. Contact a maintenance or service company with any questions or concerns.

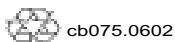
- **Hot Water Heaters** - Over time, these appliances may rust or develop cracks, and the resulting leaks can be very costly. Check your water heater for rust and deterioration every year. Check the drain pan for water and ensure that the drain line for the overflow pan is not clogged. Drain and clean the water heater as recommended by the manufacturer.
- **A/C Drain Lines** - Damage can occur when the line that drains condensation from the evaporator coils becomes clogged and water overflows from the drip pan. To prevent this, periodically check the drip pan for water and consider an annual inspection or service call to reduce the buildup of algae and mold in the drain line.
- **Appliance Hoses** - Broken hoses are among the most common causes of water damage. Regularly inspect hoses and hose fittings on washing machines, icemakers and dishwashers for kinks, cracks, bulges or evidence of deterioration. Replace standard rubber washing machine hoses every two to five years, or more frequently if they are showing signs of wear. Consider using steel-reinforced hoses for longer life.
- **Showers, Tubs, Sinks and Toilets** - Water that leaks from around bathtubs, showers, sinks and toilets can cause extensive damage because the leak is often hidden from view. To prevent leaks, make sure you have a continuous watertight seal of caulk around the edges of sinks, toilets, tubs and shower stalls. Cracks or mold on the caulk or on the grout at tiles on walls or shower floors may indicate that you do not have a watertight seal. Remove all caulk or grout, clean and dry the surface thoroughly, and apply fresh caulk. Do not apply new caulk or grout on top of the old materials.
- **Visible Piping** - Routinely check piping under cabinets and sinks for leaks, rust and evidence of deterioration.
- **Waste/Garbage Disposal System** - Routinely check for cracking or other sources of leaks in the waste disposal system.
- **Caulking around Windows, Doors, Penetrations and Cracks** - Windows and doors should have a continuous bead of caulk sealing them to the exterior surface of the home. Penetrations of the exterior walls by pipes, electrical conduit, phone or cable lines, and exhaust ducts should also be caulked. Cracks or mold on the caulk may indicate that you do not have a watertight seal. Remove all caulk, clean and dry the surface thoroughly, and apply fresh caulk. Do not apply new caulk on top of the old caulk.
- **Attic and Ceilings** - Routinely check for wet insulation and water stains.
- **Wallpaper** - Routinely check for bubbling and/or peeling, as well as pink or black stains.
- **Roofs** - Keep roofs free of debris that can damage roofing material and allow water to seep in. Trim tree branches to prevent them from rubbing and damaging the roof. Promptly repair missing or damaged shingles. Properly seal any cracks around chimneys, skylights and vents. Check metal flashing for holes, cracks or other damage. Replace flashing or use silicon caulk to seal any openings.
- **Landscape** - Yards should slope away from the house to prevent puddling near the foundation or under pier and beam houses.
- **Sprinklers and Irrigation Systems** - Do not allow sprinklers or sprinkler heads to soak the exterior of the home.
- **Check for evidence of water stains or odors, particularly after rains, on areas that could get wet.**

POTENTIAL SIGNS OF MOLD GROWTH

- Unexplained discoloration on any surface
- Musty odor
- Dark spots on or around vents
- Water stains anywhere
- Peeling or curling of vinyl floors or wallpaper



Published by
The Texas Department of Health
The Texas Department of Insurance



cb075.0602