



HOUSING & ENVIRONMENT

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MOLD: THE UNINVITED GUEST

PREVENTING MOLD IN YOUR HOME

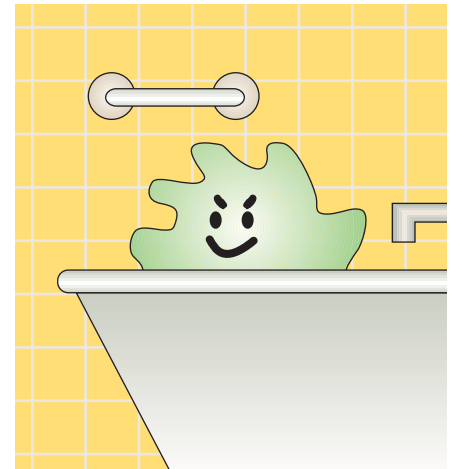
Mold in your home can be a serious health hazard. While molds come in a variety of forms, all of them can be potentially harmful to your health. Some molds produce materials that can cause allergic reactions, asthma attacks or other health effects. No one wants to live in a house with mold, but unless preventative steps are taken, mold can progress from being an unwanted visitor in your home to an almost permanent resident.

Is Your Home Mold Friendly?

Without knowing it, many of us live in homes that are inviting to molds. Molds need very little to feel comfortable, primarily moisture and the right temperature. The following conditions help create the right environment for mold:

- Excess moisture (caused by leaky plumbing, excessive humidity, poor drainage, etc.)
- Poor ventilation
- Unclean household conditions

Mold is especially attracted to places that are often damp, such as bathrooms and crawlspaces. While it may be very difficult to completely eliminate mildew (a thin, whitish to bluish-green growth produced by molds) in your bathroom, it is important to keep the presence of mildew to a minimum. As with all molds, moisture is the primary cause of mildew growth.



Maintaining Moisture Balance

An uneven moisture balance will help create problems with mold. The four factors for maintaining the proper moisture balance in your home are as follows:

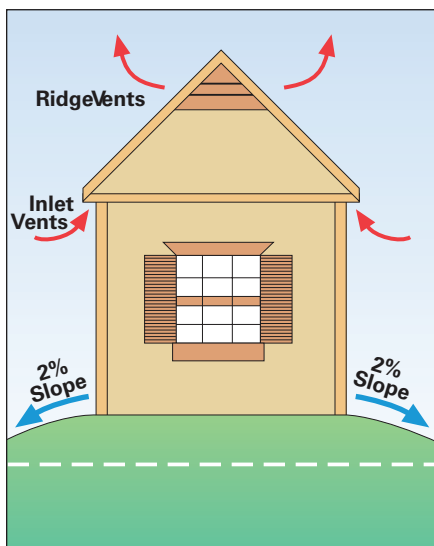
1. Source Strength refers to the sources of moisture in your home. Reducing indoor moisture sources can be accomplished by fixing leaky pipes, limiting the time spent doing certain household activities (bathing, cooking, etc.), increasing ventilation, keeping gutters working properly, and improving drainage around the house. Dehumidifiers are not very effective because they can put a lot of heat back into the area.

2. Temperature needs to be monitored as it relates directly to the amount of water vapor in the air. You can prevent condensation by increasing surface temperature, either by adding insulation or increasing air circulation.

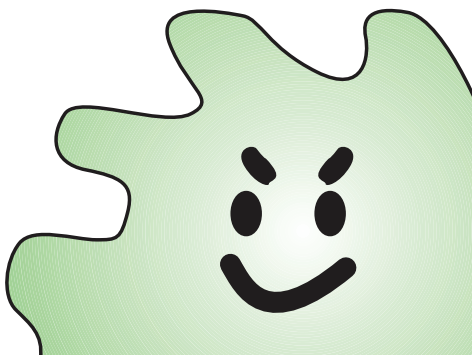
3. Moisture Transfer Rate refers to the passage of moisture in and out of your home. Sealing air leaks, weatherizing before insulating, and using a vapor retarder in crawlspaces can effectively alter your home's moisture transfer rate.

4. Circulation-Ventilation Rate of your home affects indoor moisture. Installing HVAC system vents located to promote circulation, and using spot ventilation to remove excess moisture (such as in the kitchen and bathroom) can improve your home's circulation-ventilation rate.

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Proper ventilation and external water management are key elements in controlling moisture.



Controlling Household Humidity

Many household activities, including bathing, cleaning, cooking, washing dishes, using the washing machine and clothes dryer, and even breathing can raise your home's humidity level. Vapor production can be reduced by:

- Decreasing bathing time. Not over-boiling liquids while cooking.
- Washing only full loads of laundry.
- Venting combustion appliances to the outside (such as your dryer) also removes carbon monoxide, a killer gas.
- Opening windows often to allow for circulation when the humidity level outdoors is not too high.
- A dehumidifier (if the heat generated is vented out) and an exhaust fan can also be used to remove excess household humidity.

Using Vapor Retarders

Many materials used on the interior side of exterior walls, such as plastic, vinyl wallpaper, dry wall, wood paneling, and plywood do not allow water vapor to pass through to the interior of your home. Therefore, water vapor can condense inside the wall, bringing dampness and subsequent mold. Vapor retarders, which are made of material resistant to vapor flow, can be used to avoid condensation. Vapor retarders should be applied on the warm side of a wall, usually between the framing and interior sheathing or wall finish. Vapor retarders can also be used under concrete slabs to resist vapor movement into your home through the door.

Ventilation

Both attics and crawl spaces require good ventilation. Ideally, your attic should be equipped with inlet vents at the eaves to allow in cooler air and ridge vents at the top to release warmer air. In crawl spaces, vents should be located near each corner and located in the top 8 inches of the foundation.

Managing External Water

Ideally, houses should be sited on the crown of a hill so that water can drain away from the foundation on all sides. Unfortunately, most homes are either built into the side of a slope or on a flat site. Both of these scenarios can lead to drainage problems. A 2 percent grade sloping away from your home on all sides for a minimum of 10 feet will help keep water away from the foundation. Owners of houses constructed more than 25 years ago should inspect their yards to make sure erosion and landscape patterns have not shifted drainage toward the foundation.

Good-Bye Mold

By preventing the moisture problems that can cause mold to grow in your home, you are providing an environment for your family that can be free of mold and its health related problems. Closing the door on mold will protect you from the health and property damage brought about by this invasive and hazardous houseguest.

Sources:

"Under the Roof: Moisture Control in Homes," Cooperative Extension Service, University of Georgia College of Agricultural and Environmental Sciences.

"Mold Remediation in Schools and Commercial Buildings," U.S. Environmental Protection Agency.

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Circular 1047-1 (HACE-E-52) / Reviewed May 2014

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