

# Information

# Water & Mold Issues

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## Water Damage & Mold: Fungi are not Fun Guys.....

Molds are found everywhere indoors and outdoors. Molds are needed to breakdown organic dead materials. Mold grows on plants, foods, leaves, and organic materials. In the modern home construction, molds can grow on paint, drywall (paper), Insulation with paper backing, building paper, wood products, and the bio-film (soiling) that attaches to virtually any surface. Molds are not always green and black but can be white, orange, pink, purple red, etc. depending sometimes on the food source.

Mold needs water or at least moisture to grow. The moisture may come from flooding, sewage backflows, rain entering the structure, leaky roofs, condensation, cooking steam, shower steam, and misdirected irrigation sprinklers hitting the walls or saturating the ground. Moisture in the vapor form can come through the slab in excessive quantities causing conditions conducive to mold growth.

Spores are part of the mold's reproductive cycle. Mold spores are tiny and light weight when they become airborne in large quantities they can cause health related symptoms. If you suspect a mold exposure resulting in health symptoms, consult your medical professional. Mold can cause structural damage to your home. Molds are digesting the organic materials. Constant wetting and or wetting and re-wetting can cause structural damage.

Certain individuals are more at risk for health symptoms than others. The following individuals are at a greater risk: Infants and children, elderly, immune compromised persons (HIV, cancer / chemotherapy), liver disease, organ transplant patients, recovering surgery patients.

Mold can be found on walls and ceilings, hidden cavities, wood framing materials, painted surfaces, furniture items, clothing, shoes, books, papers, crawlspaces, attics, heater returns, etc.

***"The Dose Makes the Poison"*** one million to 10 million mold spores can be found on one square inch of moldy drywall. One-and-a-half billion spores can be found in one square foot of moldy drywall. Mold problems cannot be based on what you see; it's what you don't see that makes taking precautionary measures important. The first rule of mold remediation is to control the contaminant at its source.

**What to look for..... (Always Bring a Bright Flashlight)**

These are just a sample of the **“red-flag”** areas where mold may be found.

- **Water stains!** On drywall, window ledges, frames, ceilings, ceiling tiles, finished wood, unfinished wood. Mold is more likely to be found on drywall and plaster with button board (gypsum fastening board with paper surface) than old time lath and plaster with redwood or cedar lath and cementitious plaster finish.
- **Swelling!** Wood base molding, drywall and molding especially at corner joints. Particle board cabinet corners, shelves, esp. under sinks. Wood framing swollen under drywall causes surface planar distortion that is visible especially around windows etc.
- **Stains!** Stucco stains, drywall stains, painted surface stains, ceiling stains. The stains may be white, green, gray, brown, black, red, pink, orange etc. Not all black looking molds are toxic. Not all toxic molds produce toxins.
- **Carpet discoloration**, carpet and pad odors (not pet related), pull the carpet back is the tackless strip water stained, water damaged, rotted and rusted?
- **Cabinets and closets**, shelves appear to be swollen or textured under the paint or shelf paper, musty odors, discoloration of the paint surface especially at the bottom portion of the walls.
- **Poor design issues** such as window seats with storage boxes that are un-vented, missing or lack of insulation material.
- **Leaking plumbing fixtures**, both supply lines and drain lines. Check the toilet flange wax ring seal. They are notorious for leaking causing moisture and mold damage to surrounding materials and materials below the flange.
- **Lack of adequate ventilation**, causing mold growth on ceiling and wall surfaces especially in kitchen and bathrooms. Check ventilation fans for proper function, and do they really vent to the outdoors. Un-vented fans exhausting into garages, crawlspaces and attics can contribute to mold growth.
- **Exterior Issues: Stucco staining or “blistering”**. Efflorescence (white powdery deposits), over-watering of landscaping especially in planter boxes located close to the footing. Irrigation sprayers hitting the walls. Buried stucco weep screeds (remember the code is now 6” from the screed line to the top of the soil). Hardscape (sidewalks, patios etc.) features too close or hiding the stucco screed. Over wet crawlspaces, inadequately ventilated crawlspaces. Poor drainage or improperly sloped or graded landscape. Lack of French drains and or landscape surface drains. Lack of gutters and downspouts that do not direct water away from the footing. Roof leaks, poor roof design and flat roofs.

### **Mold Contamination: Why Remove it and not just kill it???????**

A common misconception regarding mold contamination is “if you kill it, the mold is no longer a threat.” Many people spray biocides (bleach included) leaving occupants with the false security that their problem has been mitigated.

“Killing microorganisms usually does not destroy their antigenic or toxic properties.” Therefore, even microbial growth that has been treated with a biocide should be removed from the indoor environment.” IICRC S-500 Standard and Reference Guide for Professional Water Damage Restoration.

Chemical treatments and heat treatments do not necessarily denature the mold. Toxicity issues remain and are present even after the mold spore is dead. Therefore the most widely accepted guidelines and standards recommend the complete removal of mold contamination from porous materials under containment provisions, large quantities of mold removal should be handled by a trained and qualified, experienced remediation contractor.

### ***PREVENTION IS KEY!!!!!!!!!!!!!! Helpful Hints.....***

Keep indoor humidity low! Try to keep the indoor humidity levels at around 45% or less. House plants, aquariums, cooking, showers, steam rooms, all contribute to indoor humidity. Ventilate! Open windows on nice days. Use exhaust fans in bathrooms and kitchens.

Housekeeping! Vacuum surface dust (preferably with a HEPA vacuum) Clean all surfaces regularly.

Remove carpets from bathrooms and kitchens, frequently clean area rugs.

Dry all water intrusion areas ASAP!!! Use a professional restoration company to assist with this.

Fix all plumbing leaks, both supply lines and drain lines. Use a leak detection company if needed.

Fix leaking roofs, direct gutter downspouts away from the foundation.

Grade landscape areas to slope away from the foundation, switch planter box irrigation to drip systems. Direct irrigation sprinklers away from the walls watch out for deflection from plant leaves.

Clothes dryer vent pipes should always exhaust to the outdoors! Never exhaust into garage, attics or crawlspaces.

Ventilate crawlspaces! Avoid water intrusion and over-watering that can cause moisture in crawlspaces.

Stucco weep screed should not be covered or under soil level. Water can enter the wall cavity if below soil line.

Insulate the exterior walls of the house. This helps prevent indoor dew-point surface condensation.

**Jim Mosier, AMRT, WRT** is the Remediation Supervisor with **Building Restoration, Inc.** Jim has well over 30 years experience in the restoration field handling water damage, fire damage and mold remediation issues for residential, commercial, and insurance related claims. Jim Mosier is a contributing author to the IICRC S-520 Standard and Reference Guide for Professional Mold Remediation. Jim Mosier serves also as a Superior Court and Federal Court recognized Expert Witness in the fields of water damage restoration and mold remediation. **Building Restoration, Inc. has 45 years experience in the General Contracting and Restoration industry.** They are longtime members of the Better Business Bureau and recognized in the industry as a quality general contractor for new construction, remodel and insurance damage repair.