



## **MOLD FACTS & PREVENTION TIPS**

Molds produce allergens, irritants, and in some cases mycotoxins, which may cause adverse health reactions in humans. The types and severity of symptoms depend, in part, on the types and concentrations of molds present, the extent of an individual's exposure, the age of the individual, and the individual's existing sensitivities, allergies, and health condition.

Mold spores (seeds) are present in every environment. Mold needs two things to grow: 1) food from organic materials, such as dust, drywall, wood, etc., with indoor dust being an excellent food source; and 2) moisture from a water leak, flood, condensation, or high (>60%) humidity.

### **MOLD PREVENTION TIPS**

- **Good housekeeping is closely related to good indoor air quality.** Household dust is an excellent food source for mold, and dust is also a breeding ground for insects and allergens. Household dust typically contains a mixture of dead skin cells, hair, clothing fibers, bacteria, dust mites, parts of dead insects, soil, pollen, and even minute pieces of plastic.
- **Run your A/C thermostat on “auto-fan” only, not on “manual”.** When an air handler fan is set on “manual on” instead of “auto fan”, the fan does not turn off when the temperature on the thermostat is reached; only the condenser outside turns off. The continuous running of the fan tends to pull in outside air (high in humidity) that is not being conditioned by the coils of the air handler, eventually resulting in random surface mold growth.
- **Use a quality MERV (Minimum Efficiency Reporting Value) rated filter of 7 or 8 to prevent dust and debris build-up on the A/C coils.** If you can see through your filter, it is low quality. Filters with a MERV rating of 7 or 8 are nearly as effective as true HEPA filters at trapping most airborne indoor particulates. I do not recommend using a MERV rated filter higher than 9 because the coils of the air handler may freeze over during the hotter months of the year due to restricted air flow through the coils.
- **If your A/C does not have a condensation drainpipe cut-off switch, please install one.** Slime builds up inside the condensation drainpipe and blocks the drain, resulting in a water loss followed by mold growth, which may not only affect the area around your A/C handler but also adjacent rooms. Periodically, especially in the summer, pour bleach or vinegar down the condensation drainpipe to unclog the slime.
- **Routinely clean and disinfect A/C vents.** During the hotter months of the year when the A/C is running more often, warmer air contacts the cooler A/C supply vents, often causing condensation to form, followed by mold growth. As you may have noticed, the A/C supply vent closest to the air handler usually condensates the most. Routinely cleaning and disinfecting the A/C supply vents will help prevent mold growth. Also, changing metal A/C vents to vinyl vents will reduce, if not eliminate, condensation from forming.

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- **Maintain the relative humidity inside your residence below 60%**
  - Generally speaking, to control the indoor humidity below 60% during the summer months, your A/C thermostat should be set around 76-78°F, cool, auto fan.
  - Your A/C thermostat will drift overtime. Check the calibration of your thermostat once a year. Tape an accurate thermometer on the wall next to your thermostat. Wait 15 minutes and check the temperature reading on both devices. Replace the thermostat when needed.
  - If your A/C thermostat does not display humidity readings, I strongly recommend getting a relative humidity meter (hygrometer) or at least a humidity ornament to routinely check the humidity inside your home or workplace.
  - It can be very challenging to control the indoor humidity below 60% during the colder months of the year without the use of a portable dehumidifier because the A/C only removes moisture (humidity) from the indoor air while running on cool, not heat.
  - Typically, a dehumidifier drains into a bucket inside the machine, and the bucket must be emptied periodically. If you are away for an extended period, place the dehumidifier on a kitchen countertop where it can drain into a kitchen sink. Some dehumidifiers now come with a self-contained pump and hose to purge the collected water down a drain.
- **Placing UV lights inside the air handler has proven to be effective in preventing mold growth inside the air handler housing but can be costly.** The ideal location for UV lights is inside the air handler, especially if the UV lights are placed near areas of the system where moisture most often collects, such as the coils and drip pan. The UV light kills mold where the UV light is shining.
- **Air handler units are best located in an indoor living space.** Most are in the garage. The worst areas to locate an air handler is in the attic or crawl space.
- Most garages in Florida are not serviced by the A/C system, which means the humidity inside the garage is not being controlled. The resulting high humidity will lead to surface mold growth. **Increasing the air flow in a garage with a ceiling fan and allowing sunlight to shine in when windows are present will help reduce surface mold growth**, but surface mold growth from high humidity will randomly occur. When you observe surface mold growth in the garage, clean and disinfect the affected areas. Also, use caution when storing items in the garage, especially when these items may be brought into a living area.
- **Maintaining good air circulation is essential to preventing mold inside the home.** Mold spores thrive in stagnant air, and a lack of air circulation can reduce moisture evaporation, further increasing your risk of developing mold. 1) Continuously run ceiling fans, on at least low speed. 2) Since most closets do not have A/C supply vents, leave the doors open to closets and bedrooms to increase air circulation. 3) Leave spaces between clothes hanging in the closets to facilitate air flow. 4) Use Damp Rid bags in closets to trap excess moisture. 5) Leave 3 - 4 inch gaps between your walls and furniture.

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- **Sunlight is arguably your most powerful natural weapon against most mold and mildew.** Sunlight has a drying effect on a structure's exterior and interior (when shades/blinds/curtains/storm shutters are open). Additionally, the UV light from the sun kills mold and bacteria. Wind also has a drying effect on the exterior of a structure. Opening shades/blinds/curtains/storm shutters and cutting back tree limbs/bushes/shrubs will have a significant drying effect on your residence or workplace.
- **Routinely clean and disinfect casings around windows and glass doors.** Condensation, especially on single pane windows during colder months, can collect in the corners of windows and glass door casings and lead to mold growth. Collected moisture/water in the corners of windows and glass door casings should be routinely dried with a towel and cleaned with a disinfectant. As you may already know, condensation always occurs on the warmer side of the glass.
- **Periodically visually inspect all potential water sources.** This includes kitchen and bathroom vanity plumbing inside the cabinets, toilet water supply lines, refrigerator water lines, washing machine water lines, A/C condensation drainpipes, and hot water heaters. Identifying moisture/water intrusions early can prevent costly mold remediation. Upon discovery of visible mold growth, it is important to contain/cover the visible mold growth if possible to help prevent airborne mold spores from impacting other rooms and areas. For example, if moisture and mold impacts are discovered on the wall behind your refrigerator or inside a bathroom vanity cabinet, you should not remove the wall or cabinet without considering how to control/limit the release of mold spores into the indoor air. As mold dries, the mold spores become airborne more easily.
- **Please turn off the water to your residence/workplace at the meter whenever you plan to be away more than 24 hours.** I have been involved in too many major remediations that could have been prevented if the homeowner/business owner had just turned the water off before they left.
- **Consider replacing carpet with ceramic tile or vinyl flooring.** Carpet collects almost every spilled material, tracked soil, and settled airborne contaminant that enters your home, including bacteria, allergens, and pollutants. Laminated flooring is more durable than carpet, but once subjected to moisture/water, cupping of the joints and swelling of the boards can occur. In addition, moisture/water that seeps underneath the laminated flooring is trapped by the laminated flooring, causing mold to grow between the flooring and subfloor. Ceramic tile and vinyl flooring, however, are durable and resistant to most moisture/water impacts.
- **Periodically walk around the exterior of your home/workplace looking for:**
  - Water stains/iron stains on the exterior siding from broken or unadjusted sprinkler heads can lead to interior water intrusion. Wood and concrete siding are not impermeable to water/moisture.
  - Caulking failure around the exterior of window and door casings can also lead to interior water intrusion.
  - Trees, shrubs, bushes, or items pushed up against or near the exterior of your home/workplace blocks the drying effects of sunlight and wind.

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- **I recommend not using air fragrances/fresheners.** Air fragrances/fresheners mask any musty odors that may be present, which may result in hidden mold growing unnoticed for a longer period of time. In addition, the fewer chemicals introduced into a residence or workplace, the better the indoor quality will be.
- **Ozone/Ionizer Air Purifiers:** The United States Environmental Protection Agency conducted a study regarding ozone generators that are sold as air cleaners, including ozone generators manufactured with an ionizer in the same unit. According to the EPA's study, ozone generators are not effective in controlling indoor air pollution and can, in fact, cause harmful health consequences. Please refer to <https://www.epa.gov/indoor-air-quality-iaq/ozone-generators-are-sold-air-cleaners>.

*If you need additional information or have any questions or concerns,  
please contact me.*

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