

# Mold Clean-up Myths

- 1. Bleach Is Not Effective – And May Be Hazardous To Your Health**
  - a. Mold usually returns in less than 24 hours after using bleach.
  - b. Cleaning stirs up mold spores and puts them into the air, creating more mold related health problems and allergic reactions.
  - c. Bleach treats only the surface. It does not kill or eliminate airborne mold spores.
  - d. Bleach is 3-6% Sodium Hypochlorite and 94% to 97% water. The Sodium Hypochlorite evaporates, leaving water behind to foster the growth of more mold.
  - e. Bleach is ineffective and not recommended for use on porous surfaces such as concrete, wood, wallpaper, sheetrock, grout, books, clothing,
  - f. Chlorine Gas, released by mixing bleach with any acid, may be lethal.
  - g. When inhaled during application, chlorine particles may cause lung and bronchial irritation, as well as headaches.
  - h. Chlorine particles, according to some reports, may bio-accumulate in the thyroid leading to reduced thyroid function and possibly thyroid cancer.
- 2. Chemicals, Biocides And Fungicides Are Dangerous Poisons**
  - a. Mold will rebound using these poisonous agents, usually in 2 weeks or less.
  - b. Most of these are hazardous to your health as well as to mold.
  - c. These agents either treat surfaces or the air, they almost never treat both surface and air.
- 3. Ozone Generators May Pose Multiple Hazards To Your Health**
  - a. Air Purifiers producing ozone have been banned by the state of California, citing studies that ozone leads to lung damage.
  - b. Used at levels sufficient to kill mold, ozone produced by ozone generators may oxidize and damage common household materials (e.g., leather, upholstered furniture, carpet) and produce off-gassing of harmful contaminants.
  - c. According to recent studies, ozone may destroy or damage electrical wiring, nails, and other building materials when used at levels sufficient to kill mold.
- 4. UV Kills Mold Only In Air Exposed Directly To The UV Light.**
  - a. UV does not treat surfaces.
  - b. UV treats only air streams that are directly exposed to it. Air that enters a home or building through doors and windows will not be exposed to UV and will usually contain mold spores.
  - c. UV has no impact on the source of mold in buildings.
- 5. Tear It Out, Remove It, Replace It, Tear It Down**
  - a. Repairing leaks is essential to eliminating mold problems, however, it may not be necessary to remove and replace everything that has been affected by mold.
  - b. This option can be very costly.
  - c. This does not remove mold spores from the air.
- 6. Chlorine dioxide and other fumigants**
  - a. Not practical for occupied buildings.
  - b. Harmful to humans and pets.
  - c. When applied at levels sufficient to kill mold may damage metal fasteners, nails, and electrical wiring.

**Using Bleach and other chemicals is bad advice. Here is what the experts say:**

### **US Environmental Protection Agency (EPA)**

In the past, even the EPA recommended cleaning mold infested areas with bleach and water, and you can still find this advice on some websites dealing with mold. On their website in an article entitled "A Brief Guide to Mold, Moisture, and Your Home", the EPA now says:

"The use of a chemical or biocide that kills organisms such as mold (chlorine bleach, for example) is not recommended as a routine practice during mold remediation."

### **The American Industrial Hygiene Association (AIHA)**

In answer to the question of whether bleach should be used in mold remediation, the AIHA says:

1) Biocides like bleach do not remove allergens that can lead to allergies in sensitive individuals nor do they remove other metabolites from mold that can cause adverse reactions in some people.

2) Commonly used chemicals do not effectively kill molds. For example, active fungal growth on a surface may produce a spore density of 1 million spores per square inch. Treating this site with a biocide that has an effectiveness of 99.999% would still leave an estimated 10 viable spores per square inch. As such, mold growth may recur if the underlying moisture problem is not resolved.

### **The California Department of Health Services evaluated ozone and had this to say:**

"Ozone is a strong oxidizing agent that is used as a disinfectant in water and sometimes to eliminate odors. However, ozone is a known lung irritant.

Ozone generators have been shown to sometimes produce indoor levels above the safe limit.

Furthermore, it has been shown that ozone is not effective in controlling molds and other microbial contamination, even at concentrations far above safe health levels. Also, ozone may damage materials in the home, for example, cause rubber items to become brittle.

For these reasons, the California Department of Health Services strongly recommends that you NOT use an ozone air cleaner in any occupied space."

Reference: The CDHS IAQ Info Sheet: Health Hazards of Ozone-generating Air Cleaning Devices (January 1998), available on the CDHS-IAQS web site.