



The Truth About Mold in Buildings

Mold Defined

Mold is a fungal growth that forms and spreads on various types of damp or decaying organic matter. There are many different types of molds which come in different colors and consistencies. Mildew is also a type of mold. They are found both indoors and out, and in nearly every climate region of the world. They have been around longer than we can determine. Molds are a group of Eukaryotic organisms in the lower ranks of the plant world. They are plants devoid of chlorophyll, (the stuff that makes higher level plants green), and reproduce by the release of spores. These spores are tiny, invisible to the naked eye, and able to float through the air for great distances before coming to rest.

Chances are good that you are inhaling mold spores right now! It is also likely that your house, your neighborhood and your workplace have some mold in them, but that is neither a reason to panic, nor a reason to dismiss mold as no threat to your health.

What Mold Needs to Live

Airborne mold spores need three things to complete their duty of perpetuating their kind. They need:

- A surface on which to grow,
- A source of food, and
- Moisture

So let's take a look at these one-by-one.

A surface on which to grow can be almost anything. It can even be inorganic, as long as another source for #2 can be present, but surfaces that provide food along with an attachment surface are clearly the most conducive.

Next, the source of food means something with a carbon base. That means all forms of sugars and starches including those found in the cells of wood and common to many household materials. Nearly everything organic has the food necessary to sustain mold growth.

That brings us to the big factor, the one most controllable, and that is moisture. Mold needs water, and it needs water present over a sustained period of time. It doesn't take much, just a little dampness will do, but if it is present over a long period, you are almost sure to have blooming mold. Control excess moisture in your house or workplace and you will be controlling mold.

One of molds favorite hosts of all is the gypsum wallboard known as drywall that has been used as the predominant material to line the interior walls and ceilings of buildings for the past fifty years in the United States. The gypsum in the wallboard is a mineral, and contains no food, but the manufacturers combine it with corn starch, (#2), from right here in Central Illinois to form the wallboard. Add to that the nice coarse paper backing on the dark side of the wallboard, (#1), to this material's capacity to wick and hold water, (#3), and drywall becomes the ideal mold host.

Mold Toxicity

Molds may be toxic. It depends on the species/strain of the mold based upon their capacity to generate and secrete toxic chemicals. Mycotoxins are the most prevalent but molds may also generate glucans an microbiological organic compounds, (MVOCs), and each individual is unique in how he or she may respond to these compounds. There is no general rule applicable to everyone.

The news media in recent years has brought us many stories about "black mold" and its hazards. Usually they are referring to the family of molds known as *Stachybotrys* and its two sub-strains *Stachybotrys Atra* and *Stachybotrys Chartarum*. Just because mold appears black in color does not make it the dreaded "black mold". Only a sample taken by a trained mold investigator and sent to a qualified laboratory can determine the specie and strain of a mold.

Mold Toxicity Continued:

Blastomyces, Candida, Emmonsia, Ganoderma, Microsporium, Mucor, Rhizopus, Trichophyton and others, are also common molds known to produce health and hygiene problems in some people but are not black in color. Penicillium and Aspergillus are also very common molds associated with indoor air problems but not necessarily black in color.

Symptoms

Common side effects of house mold include coughing, respiratory distress, hives, itching, runny nose, sneezing, watery eyes, sinus congestion, headaches and wheezing. Elevated concentrations of mold spores can also trigger asthma attacks in those suffering with asthma, and can even challenge the body's immune system sufficient to produce fever. A study performed in 1999 at the Mayo Clinic revealed that out of 210 sufferers of chronic sinusitis, 202 tested positive for fungi in their mucus.

What to Do?

The best defense you can mount to combat mold related symptoms is to identify and eliminate the sources of excess moisture in your building. The following are some areas to consider based upon my own experiences as a Certified Mold Investigator.

Keep your rain gutters cleaned-out and downspouts maintained so that rainwater is carried away from the building.

Maintain a ventilation fan in each bathroom, vented to the exterior and run it for at least ten minutes after each bath or shower.

Install a vented range hood, (ducted to the exterior), over your cooktop and use it when you cook.

Keep the vent from your clothes dryer clear of lint and able to carry clothes-drying exhaust air to the exterior.

Do not use clothes dryer heat harvesters.

Inspect your attic with a flashlight at least twice per year. Look for water intrusion, especially around chimneys, vent pipes, valleys and around dormers. Look for wet spots on the attic insulation.

Inspect your basement or crawl space for plumbing leaks and storm water intrusion at least twice per year.

Also keep areas beneath sinks and lavatories free from clutter which may hide leaks.

Avoid the use of humidifiers and vaporizers, especially during the heating season when condensation of moisture in or on walls is most likely.

Shampoo carpets during mild weather when windows and doors can be opened to facilitate the drying process.

Dry that wet carpet as quickly as possible.

Do not store clothing, bedding, pillows or other textile products in plastic bags, and never up against exterior walls. They can create a cold zone against that wall and promote condensation.

Maintain air conditioners. Be sure window units are sloped away from the house, draining properly and filters are clean. Inspect condensate drains on central a/c units and high-efficiency furnaces to assure condensate is not retained.

If you follow these simple steps and keep the moisture levels in your home or office low, there is little chance you will suffer from the side effects of excessive mold in those buildings. For more on this subject, or any question you may have, please contact me:

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