

## Frequently Asked Questions (and Answers) about the Big Picture of Water Damaged Buildings

### **Q1. Is mold growth in a building a cause for concern or not?**

Most definitely yes, for multiple reasons. The foremost concern is that fungal growth inside a building is a symptom of a bigger problem. Mold growing in visible or hidden areas means that there is some form of uncontrolled water intrusion in the structure. Whether it is a leak, infiltration from the soil, condensation from temperature differentials, or improperly ventilated humidity; mold growth signals water and water damages buildings. From that perspective alone fungal contamination should result in a quick response to find and correct the source of water intrusion.

Nor can the potential impacts of the fungal contamination itself be brushed off. Although mold exposures do not impact everyone to the same degree (neither does the flu, alcohol, or many other substances or exposures), this variation in physical responses is no reason to assume that occupying a water damaged building is acceptable. Indeed, over a dozen authoritative documents, regulatory agencies, and industry associations around the world all agree: fungal contamination of interior surfaces is unacceptable from a health/hygiene standpoint.

### **Q2. What other contaminants could be associated with water damaged buildings?**

Once water enters a building as an intrusion (*i.e.*, not controlled in pipes, sinks, tubs, drains, etc.) the interior environment of that structure changes dramatically. Uncontrolled moisture supports the proliferation of viruses, bacteria, fungus, dust mites, cockroaches and other insects, and vermin such as rodents, bats, and birds. Residue from any of these sources can lead to health problems. More importantly, medical researchers are just beginning to evaluate the problems that are created when a person's body and immune system are assaulted by multiple contaminants supported by interior moisture at the same time. Even without all the answers, the medical community now realizes that water damaged buildings pose a danger to their occupants. For example, the California Department of Public Health (CDPH) has concluded that: “the presence of *water damage, dampness, visible mold, or mold odor* in schools, workplaces, residences, and other indoor environments is unhealthy”.

### **Q3. Why is there such a divergence of opinion regarding health effects related to mold?**

The question really needs to be separated into two parts. There is little disagreement in the medical community regarding the general health effects related to mold. Virtually everyone agrees that exposure to fungal components can cause a variety of problems including allergic responses, irritation related to the mold odors, infections in individuals with compromised immune systems, and even poisoning if certain fungal materials are ingested or inhaled.

The more controversial aspects of the occupant symptoms from water damaged buildings involve the symptoms that in the past did not seem to have a direct correlation to the environment. Complaints about debilitating fatigue, memory loss, "brain fog", nausea, vision problems, headaches, shortness of breath, and many others baffled doctors, indoor air quality investigators, and building owners for decades. They just could not find the connection between the level of environmental contaminants and the symptoms that fit an expected dose/response pattern. In

other words, the investigators were looking for connection between water damaged buildings and symptoms which impacted everyone in a similar fashion. As the amount of exposure increased (dose) it was expected that the level of severity of symptoms (response) would rise in a corresponding fashion.

Currently, the medical community is split between those who still believe that many symptoms from mold must conform to the dose/response approach to contaminants and those who see water damaged buildings supporting a multitude of environmental factors which impact occupants in a synergistic fashion.

#### **Q4. Do individuals react differently to exposures from water damaged buildings?**

Yes. The medical research to explain why there are so many individualized responses has progressed dramatically over the last few years. In addition to the well-accepted medical responses of irritation, allergies, infection, and poisoning that seem to follow a dose/response relationship to a certain degree; physicians are now discussing a wide range of symptoms that occur outside of the traditional understanding of mold exposures. Specifically, the idea of Chronic Inflammatory Response Syndrome (CIRS) has been put forth as a better explanation for the range and type of symptoms that are reported and verified in individuals from water damaged buildings.

The CIRS understanding of health effects from water damaged buildings explains how two people can have the same exposure and wildly different responses. Indeed, once a person becomes sensitized and their immune system is working continuously to respond to perceived "threats", even exposures so low as to be considered trivial can continue or worsen the symptoms. Investigators who are expanding the knowledge of CIRS have even gone so far as to identify genetic markers in certain individuals that make them more susceptible to environmental exposures from water damaged buildings. This research is quite involved, but there is a steadily growing body of evidence that explains why some people can be absolutely devastated by exposures in a water damaged building that has very little impact on the majority of the occupants. Just as importantly, a greater understanding of CIRS is eliminating the stigma that individuals made ill by a building often acquired when others claim that their problems were "all in their head".

#### **Q5. Is there any hope for people who seem to be severely sensitized/debilitated by their exposure to water damaged building?**

Absolutely yes! First off, either removing the impacted individual from the contaminated environment or removing the contaminants from the environment is a key step. Understanding that the health problems are chronic, inflammatory, multi-symptom and multi-system is another important step as it helps to define the proper steps in dealing with the problem. As illustrated by the chart which lays out the big picture of dealing with water damaged buildings, there are many parts that need to be addressed by someone who is suffering from what some physicians are now calling "biotoxin illness".

Despite the fact that many steps need to be taken on both the medical and environmental fronts, there is both scientific and anecdotal data that indicates that even the most significantly impacted individuals can get better. Even so, it is not unusual for us to hear that it takes people with CIRS

12 to 18 months to recover. A dramatic example was a physician that we helped who had been exposed to *Stachybotrys* mold and almost died from bleeding lungs. After identifying the problem and removal from the offending environment it took her over a year and a half to recover most of the good health that she had prior to the occupation of the water damaged office.

**Q6. Are there any rules controlling how mold and other contaminants in water damaged buildings are treated?**

With limited exceptions, work in water damaged buildings is guided by an industry accepted standard of care. Currently, there are no federal rules that require certain steps to deal with the correction of water damaged buildings. While the State of Texas has a very detailed set of regulations covering mold remediation, they do not extend to other problems caused by water intrusion that lead to health problems such as sewer backflows. Nor has the Texas model for mold been picked up by any other state (although at this writing the State of Florida is considering adopting some basic mold remediation rules).

This situation where many aspects of addressing water damaged buildings are unregulated by a government entity presents both challenges and opportunities. With no regulations it is difficult for those who need work done on their buildings to know what constitutes a reasonable job. On the flipside, the lack of regulations allows extreme flexibility in trying different approaches to deal with the contamination issues. Despite the dearth of regulations there are many core concepts related to fixing water damaged buildings and mold remediation that are agreed upon by all the credible groups that address such concerns. In particular, individuals suffering from biotoxin illness should realize that:

- all water intrusion should be stopped and dried quickly (within 48 hours) to minimize the potential for microbial growth.
- mold remediation should begin promptly upon discovery of fungal growth.
- fungal growth, and other microbial contamination should be physically removed rather than just killed and left in place.
- removal of fungal growth typically involves removal of porous building materials that are supporting the growth.
- mold remediation areas should be isolated from other parts of the building and occupants should not be allowed in the work area until some form of post-remediation testing has verified the effectiveness of the work.
- uncontrolled removal can cause the problem to get worse rather than better by spreading spores and other materials through a process of "cross-contamination".
- removal of source material may not be enough as reservoirs of contaminants are often present in contents and on surfaces of the building in areas remote from the visible problem.