

**A PRIMER ON STACHYBOTRYS AND
OTHER MOLD CAUSES OF ACTION**

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Molds are very common in nature and frequently find their way into homes and buildings. Molds will grow about anywhere there is a readily available supply of moisture. The most common indoor molds are *Cladosporium*, *Penicillium*, *Aspergillus*, and *Alternaria*. Black mold, *Stachybotrys chartarum*, is fortunately less prevalent, but again not uncommon indoors.

Molds grow naturally indoors. Mold spores may enter buildings and homes through open doors or windows, or through heating, ventilation or air conditioning systems. Spores in the outside air attach themselves to people and animals, making clothing, shoes, bags, and pets unwitting carriers of mold to the inside of structures.

Mold spores propagate in places where excessive moisture has collected from roof or plumbing leaks, or potted plant overflows or other sources of water. Molds love flood water, and grow quite nicely inside of soaked walls. Building materials provide adequate nutrients for mold to grow into sizeable colonies. Wet cellulose materials, such as paper or paper products, cardboard, ceiling tiles, wood, and wood products, are quite appetizing homes for many molds. Other molds prefer dust, paint, wallpaper, insulation, drywall, carpet, fabric, and upholstery. Wet mold is not an indoor air quality concern — the mold must dry and release spores into the air.

Stachybotrys chartarum (also known by its synonym *Stachybotrys atra*), is often called a toxic black mold, although it is actually greenish-black in color. *Stachybotrys* is found world-wide, and consists of about 15 species. It grows on high cellulose material with a low nitrogen content, such as fiberboard, gypsum board, paper, dust, and lint. Out of doors, *Stachybotrys* grows on naturally high cellulose materials, like straw, hay, and wet leaves. *Stachybotrys* is often found in ordinary

garden soil. *Stachybotrys* grows best when there is ample moisture, excessive humidity, and low wind velocity. *Stachybotrys* thrives where the humidity is above 55%, and the temperature is between 36 and 104 degrees Fahrenheit. *Stachybotrys* does not grow on plastic, vinyl, concrete products, or ceramic tiles. It is not the green mold commonly found on bread or the black mold on shower tiles.

Stachybotrys cannot normally be identified by a routine visual inspection since all black mold is not *Stachybotrys*. The only method to determine the type of mold present is by sample analysis at an accredited laboratory.

Toxic mold environmental risk may be one of the next major real estate “due diligence” concerns, especially in property development areas where major flooding has occurred. The flooding need not be from rain, but may occur from plumbing failures, air conditioning condensation, water leaks, and accidents. Toxic mold may also be a concern where fires have occurred since water was probably used to douse the fire.

It is difficult to permanently eliminate all of the toxic mold from a structure, and it may regenerate. As a result, the health risk could return. Remediation of toxic mold must comply with accepted procedures.

Some people, especially children, exhibit more adverse reactions to toxic mold, including death, lung tissue damage, and memory loss, than other persons. A person’s reaction to toxic mold depends on his or her chemical sensitivity, genetic disposition, and predisposing health history (such as allergies, asthma, smoking, etc.). Exposure to toxic mold may be just a “health risk” to some while it is a real “health hazard” to others, imposing a potential life-threat or loss of quality of life.

Assessing this potential liability is an important factor during any due diligence investigation. Several lawsuits have already been filed to recover for toxic mold exposure in residential and commercial buildings in throughout the United States.

A 1999 Mayo Clinic study found that nearly all of the 37 million Americans who suffer from chronic sinus problems have them because of mold.

Health Effects

Stachybotrys produces a mycotoxin that causes animal and human mycotoxicosis. Stachybotrys is a possible cause of sick building syndrome. There is no known safe level of exposure to Stachybotrys. Exposure may result in respiratory problems, such as wheezing, and breathing difficulty, nasal and sinus congestion, various eye afflictions — burning, watering, reddened, blurry vision, and light sensitivity, dry hacking cough, sore throat, nose and throat irritation, shortness of breath, chronic fatigue, skin irritation, central nervous system problems — headaches, memory problems, and mood changes, aches and pains, possible fever, diarrhea, and other conditions.

Allergic reactions to poor indoor air quality are common. Animal dander (from cats and dogs), dust mites (microscopic animals living in household dust), and pollen each cause an allergic reaction.

Indoor air quality problems are especially problematic for asthmatics. Asthmatics have sensitized airways that can react to various irritants, making breathing difficult. The number of people with asthma has increased by 61% from 1982 to 1994, to a total of 14.6 million in the United

States. Asthma in children under 18 years old has increased by 72 percent in the same period, to a total of approximately 5 million. The number of deaths from asthma rose 45.3 percent between 1985 and 1995 to more than 5,600 deaths annually.

Occupant complaints about toxic black mold may elevate concern about the mold to the point where it is treated with the same cautions, response, and liability as such recognized toxins as lead-based paint or asbestos. The health hazards and risks associated with *Stachybotrys* apparently surface in the short term, unlike exposure to asbestos or radon gas which are considered long term effect hazards.

Clean Up — Light Growth

For light growth (less than one square foot) of mold growth, you should seek professional advice on how to perform the clean up. The source of the water problem must first be corrected. All roof or plumbing leaks/flooding must be fixed.

All moldy surfaces should be cleaned with a household bleach (like Clorox) and water mix with one cup of bleach mixed with one gallon of water. A little dish soap added to the bleach water will help cut dirt and oil on the wall that can hold mold. With good ventilation, apply the bleach water mix to the surface with a sponge, let it sit for 15 minutes, then thoroughly dry the surface. Be sure to wear a mask, rubber gloves and open lots of windows when cleaning with the bleach water.

If the area cannot be cleaned (like some wet broken ceiling tiles), is too damaged, or is disposable (like cardboard boxes) discard them and replace with new ones. It may be necessary to do more clean up in the home (carpets, crawl spaces) if you have a bad mold problem.

Clean Up — Heavy Growth

If you think that you have *Stachybotrys* or other heavy mold growth (greater than two square feet), seek professional advice from your local health department before proceeding.

During clean up activities, only those individuals doing the clean up should be in the home. Persons with any respiratory health problems (e.g., asthma, emphysema) should not perform the cleanup. During all clean up activities, a tight fitting dust mask and goggles should be worn. Rubber or vinyl gloves and waterproof boots should also be worn during all phases of the clean up. Open all windows for drying and ventilation.

If necessary, pump the facilities dry and clean out all debris. In case of floods, wait until flood waters have receded before attempting to pump out the basement or other low lying areas. Eliminate or correct the water problems or leaks associated with any existing source of water damage.

Carpets, rugs, furniture, and any other items with absorbent material must be removed and discarded if not thoroughly dried within twenty-four hours. Soiled curtains, clothes, linens, and any other items that can be laundered should be removed and cleaned. Any other contaminated items or materials should be discarded or disinfected for at least fifteen minutes with one cup of laundry bleach per gallon of water. Dark stained ceiling tiles or wall board should be replaced. Full strength bleach may be necessary in situations of heavy contamination; however, adequate ventilation and personal protection will be necessary. Please consult an expert.

All accumulated residue should be removed from the area including corners, edges of the floors, and under and around fixtures. Material should be lightly wetted to minimize dust. Replace

the furnace filter and vacuum cleaner bag. Shovel any bulk waste material into bags and dispose with weekly trash.

Floors, walls and any other surfaces contacted by the flood waters should be properly disinfected for at least fifteen minutes with a chlorine solution of one cup of laundry bleach per gallon of water. Do not mix any other cleaning agents with the chlorine solution. Apply solution with mops and sponges. Pay attention to any other soiled areas in the basement or low lying areas including pipes, heating ducts, ceiling, etc. Take care around electrical equipment and fixtures.

Case Analyses

Black mold's killer reputation began at Rainbow Babies and Children's Hospital in Cleveland, Ohio, where in 1993-94, ten infants became very sick, began bleeding from the lungs, and one died. The lung bleeding is known as acute pulmonary hemorrhage. The infant chokes on his blood, turns blue, and his eyes roll back in his head.

A medical SWAT team from the Center for Disease Control descended on Cleveland. The CDC investigators discovered that the infants lived relatively close together, and that all were diagnosed with acute pulmonary hemorrhage. Scientist then focused on *Stachybotrys*, since Cleveland is a rainy location, and the mold requires moisture to grow. By 1997, CDC reported that the infants with pulmonary hemorrhage were more likely to live in homes with *Stachybotrys*. Three years later, however, the CDC recanted the study, and stated that the association between the children's illness and black mold was not proven. The CDC's official position today is that the "causal link between the presence of the toxic mold and [pulmonary hemorrhaging and memory loss]

has not been proven.”

The CDC found that the one infant who died may have perished due to an adverse reaction to a roach bomb. Insecticide was found on the baby’s rattle. The vast majority of the ill infants lived in homes where smoking was prevalent.

In Reno, Nevada, an attorney filed suit on behalf of 380 homeowners in a subdivision built in a low lying area. The suit alleges that the homes were built without the proper drainage. All of the homes tested for mold tested positively. The crawlspaces built for the homes were below grade, and make the improper drainage and waterproofing problems worse.

In another Reno case, the landlord for an office building attempted to remedy *Stachybotrys* mold problems by cutting it out and placing fans in the space to dry out the area. The fans only made the matter worse by spreading the mold throughout the building.

In north Dallas, residents of the Saratoga Springs apartments had to pack up and move in March 2001 due to the presence of toxic mold. Some of the residents were instructed to move out as fast as they could gather necessary belongings, while others had up to a month. The tenants were not allowed to take much with them, and had to leave behind all but a few clothes, and some jewelry. The items left behind would have to be treated for *Stachybotrys* mold contamination. Some of the residents were tested for *Stachybotrys*, and were found to have more than three times what was considered to be a benign level of *Stachybotrys* in their system. Residents with small scratches on their arms, which would typically heal within two or three days, had not healed in more than two weeks.

Some of the north Dallas tenants evacuated from apartments with black mold are having a

hard time finding another place to live. Paul Romer was forced from his apartment by Stachybotrys around the windowsills and in the drywall. Managers in other apartments are refusing to rent to tenants who have been exposed to the black mold.

In California, two Newport Beach women sued their former landlord alleging that toxic mold in their apartment made them ill. The women claimed that eleven types of mold growing under the carpets and in the closet of their unit compromised their immune systems. From inhaling the mold and its spores, one of the women had at least 16 fungal masses, including one the size of a golf ball in her lungs. The other woman had fungal bronchitis and suffered from vertigo, blurred vision and short term memory loss.

In November 1993, Larry and Alda Brunson moved into their dream house, a beautiful brand new two-story home in the Woodlands, north of Houston, Texas, complete with a separate fenced yard for their dogs, and a large swimming pool and hot tub with mosaic tile pictures. They spent lots of extra money to customize the house and make it truly theirs, putting a hardwood floor of Larry's own design laid diagonally throughout much of the first story. They also spent some extra money they now regret -- instead of having synthetic stucco exterior siding in just a few places as decorative accent, they paid to have the entire house sheathed in the product.

Unbeknownst to the Brunsons, the EIFS or Exterior Finishing and Insulation System product they had put on their home would eventually trap water deep inside their walls, which led to rotting wood and a loss of structural integrity of the home. Bad as that was, worse yet was the hidden growth of Stachbotrys mold, a toxin that nearly cost the Brunsons the life of their daughter before they discovered what was going on. The daughter experienced seizure after seizure from exposure

to the *Stachybotrys* mold growing behind her bedroom walls. She placed a retainer for her braces on the window sill at night where it collected toxic mold spores. When she inserted the retainer, she had direct contact with the toxins. The little girl's lips swelled so extensively, that it seemed that they would explode. The Brunsons finally in desperation moved from their home, and their daughter appeared to be getting better.

The Brunsons had to buy a second house, but were left with two house notes. They could not sell the contaminated house since it could not pass inspection. The bid to remove the mold was about \$90,000. The cost of replacing the rotten wood was thousands more. Since the removal of toxic mold is not covered in many residential insurance policies, the Brunsons retained a lawyer to sue the builder, the manufacturer of the synthetic stucco and the stucco installation contractor.

Very little case law exists in Texas for toxic mold claims. In *Pena v. State Farm Lloyds*, 980 S.W.2d 949 (Tex.App. — Corpus Christi 1998, no writ), the insurer provided coverage for fungal growth on the underside of wooden planks and flooring which occurred as a result of a plumbing leak. In *Home Insurance Co. v. McClain*, 2000 WL 144115 (Tex.App. — Dallas, Feb. 10, 2000), coverage was found for mold and fungi growing as a result of an accidental discharge of water.

Plumbing leaks may damage foundations. Foundation damage is covered under the standard form homeowner's policy. See, *Balandran v. Safeco Insurance Company of America*, 972 S.W.2d 738 (Tex. 1998). Other ensuing losses (losses which follow or come afterwards as a consequence) that result from a plumbing leak or water damage may also be covered. *McKool v. Reliance Insurance Co.*, 386 S.W.2d 344, 345-46 (Tex.Civ.App. — Dallas, writ dismissed); *Merrimack Mutual Fire Insurance Co. v. McCaffree*, 486 S.W.2d 616 (Tex.Civ.App. — Dallas 1972, writ refused n.r.e.);

Aetna Casualty & Surety Co. v. Yates, 344 F.2d 939, 941 (5th Cir. 1965)(ensuing losses caused by water damage are covered losses, but found rot to be excluded); *Blaylock v. American Guaranty Bank Liability Insurance Co.*, 632 S.W.2d 719 (Tex. 1982)(settlement exclusion not applicable to damaged/frozen pipes).

In *State Farm Lloyds v. Marchetti*, 962 S.W.2d 58 (Tex.App. — Houston [1st Dist.] 1997, writ denied), the homeowners sustained damages to their dwelling and contents as a result of the backup of water and raw sewage entering their house through a drain opening in the utility room. Excessive rainfall caused the sewer system to exceed its capacity and backup into the home. The insurer denied coverage contending that the losses were excluded because they resulted from “flood or surface water” which was excluded under the policy.

The *Marchetti* court held that when a loss is the consequence of the invasion of the insured premises by non-flood water, even though the invasion may have been proximately caused by flood water, the “flood or surface water” exclusion does not apply. *Id.* at 61. The court analyzed the terms “flood water” and “surface water” as defined by prior Texas courts and distinguished claims arising from pure “floods” and “surface waters” (which are generally excluded) from claims arising from plumbing system failures which may be due in part to situations brought about by floods.

Where the damages sustained to a house and its foundation were caused by plumbing leaks, other damages are certain to follow due the nature and severity of the occurrence. Commonly, cosmetic repairs become necessary as sheet rock cracks, interior finishes become marred, and floor coverings deteriorate. These damages resulting from a plumbing leak are covered losses under the homeowner’s policy. *Oram v. State Farm Lloyds*, 977 S.W.2d 163 (Tex.App. — Austin 1998, no

writ).

Preparing the Claim

Insurance may cover the problem. Collect and study any insurance covering the structure, contents and medical health of the clients. For example, the homeowner's Form B policy covers "all risks of physical loss" to the dwelling, unless the loss is excluded under the policy. Coverage for contents (personal effects and other property) is also provided under the Form B policy, but only for certain named perils listed in the policy. There may be a landlord policy. Comprehensive general liability insurance may also provide coverage.

The statute of limitations for insurance claims

The applicable statute of limitations will probably be set out in the insurance policy. Most policies have a two year statute of limitations. If none are stated, then the limitations period is probably the four years set out under Texas law for contracts.

Occurrence of Damages

Damages may arise during more than one policy period. All insurers may be liable. A single insurer may be liable on successive or multiple policies. In other words, the policies may be stacked to provide additional coverage amounts.

Potential Defendants

If Insurance exists, the insurer is a target. The policy may call for an umpire to determine the amount of covered damages. Litigation in such circumstances may not be appropriate. If the insurer denies coverage, litigation may be necessary.

Other possible defendants include the designer of the structure, the contractors who built the structure, HVAC contractors, plumbers, building owners, and management companies. The particular defendants depend on the specific case.

Site Inspection

Stachybotrys is toxic. Site visits may be dangerous, although to prepare a claim properly, one has to know the circumstances of the mold growth. Pictures can serve in lieu of a site visit.

Plumbing Tests

A plumbing leak may well be the cause of the moisture encouraging mold growth. Tests can be performed to determine if with all interior valves turned off, water still runs in the system. A hydrostatic test can determine the tightness of the plumbing system.

Environmental Testing

The nature and extent of mold must be determined by an environmental testing laboratory. Visual inspection cannot tell what all molds are present. Tests may include samples of growth, and of the air inside and outside the structure.

Experts

If toxic molds are present, the claimant will need experts to present the case. Experts may consist of plumbers, environmental engineers or technicians, toxicologists, medical doctors, economists, and structured settlement consultants.

Damages

Damages may consist of property repair or loss, such as the cost of repairs to a structure. The property owner will have to secure estimates to repair or replace damaged building materials. Damages may also include loss of contents since toxicologists recommend not removing most property from a toxic mold environment. With medical issues, damages will include the cost of past and future treatment. Other damages may include lost wages or income.

Conclusion

It appears under Texas law that mold is certainly covered under at least some insurance policies for damage to property. Texas law has not yet been fully developed on the causality for health and medical problems, although the circumstantial evidence is substantial. Most of these kinds of cases settle, and never obtain appellate court review. Time will tell, as medical science advances and toxic mold cases become more diagnosable and treatable.

WEB SITES

www.Stachybotrys.net

This site contains an intensely descriptive account of the dangers of Stachybotrys. The site reports that Stachybotrys

spores are in a gelatinous mass and will die readily after release. The dead spores are still allergenic and toxigenic. The toxins are present on the fungal spores. Trichothecene and Sttratoxin H ahve been documented as being produced by this fungus. Animals injected withthe toxin form this fungus exhigited the folowing symptoms: necrosis and hemorrhage within the brain, thymus, spleen, intestine, lung, heart, lymph node, liver, and kidney. Individuals experiencing chronic exposure to the toxin produced by this fungus have been reported to develop cold and flu symptoms, sore throats, diarrhea, headaches, fatigue, dermatitis, intermittent local hair loss, and generalized malaise. The toxins produced by this fungus may suppress the immune system affecting the lumphoid tissue and the bone marrow. The mycotoxin is also reported to be a liver and kidney carcinogen.

www.epa.gov

(Environmental Protection Agency)

www.epa.gov/earth1r6/6pd/iaq/iaq.htm

(Contains links to EPA's Asthma Web Site)

www.cdc.gov

(Center for Disease Control and Prevention (CDC))

www.cdc.gov/niosh

(Center for Disease Control and Prevention (CDC) and National Institute for Occupational Safety and Health (NIOSH))(Provides information related to the adverse health effects of poor indoor air quality, including Legionnaires' disease, tuberculosis, sick building syndrome, and building related illness)

www.osha.gov

(Occupational Safety and Health Administration)

www.who.int/inf-fs/en/fact187.html

(World Health Organization — fact sheet on air quality guidelines)

www.cal-iaq.org

(California Department of Health Services Home Page)

www.ascr.org

(Association of Specialists in Cleaning and Restoration — a trade organization of firms that perform cleaning and restoration services after a disaster has occurred.)

www.carpet-rug.com

(Carpet and Rug Institute — provides information related to indoor air quality and floor coverings)

www.nadca.com

(National Air Duct Cleaners Association — contains industry consensus standards for the assessment, cleaning and restoration of HVAC systems)

www.buildingteam.com

(Central source for building code information for all 50 U.S. states and many counties and cities)

www.tdh.state.tx.us

(Texas Department of Health (800) 572-5548)

www.mycotechbiological.com

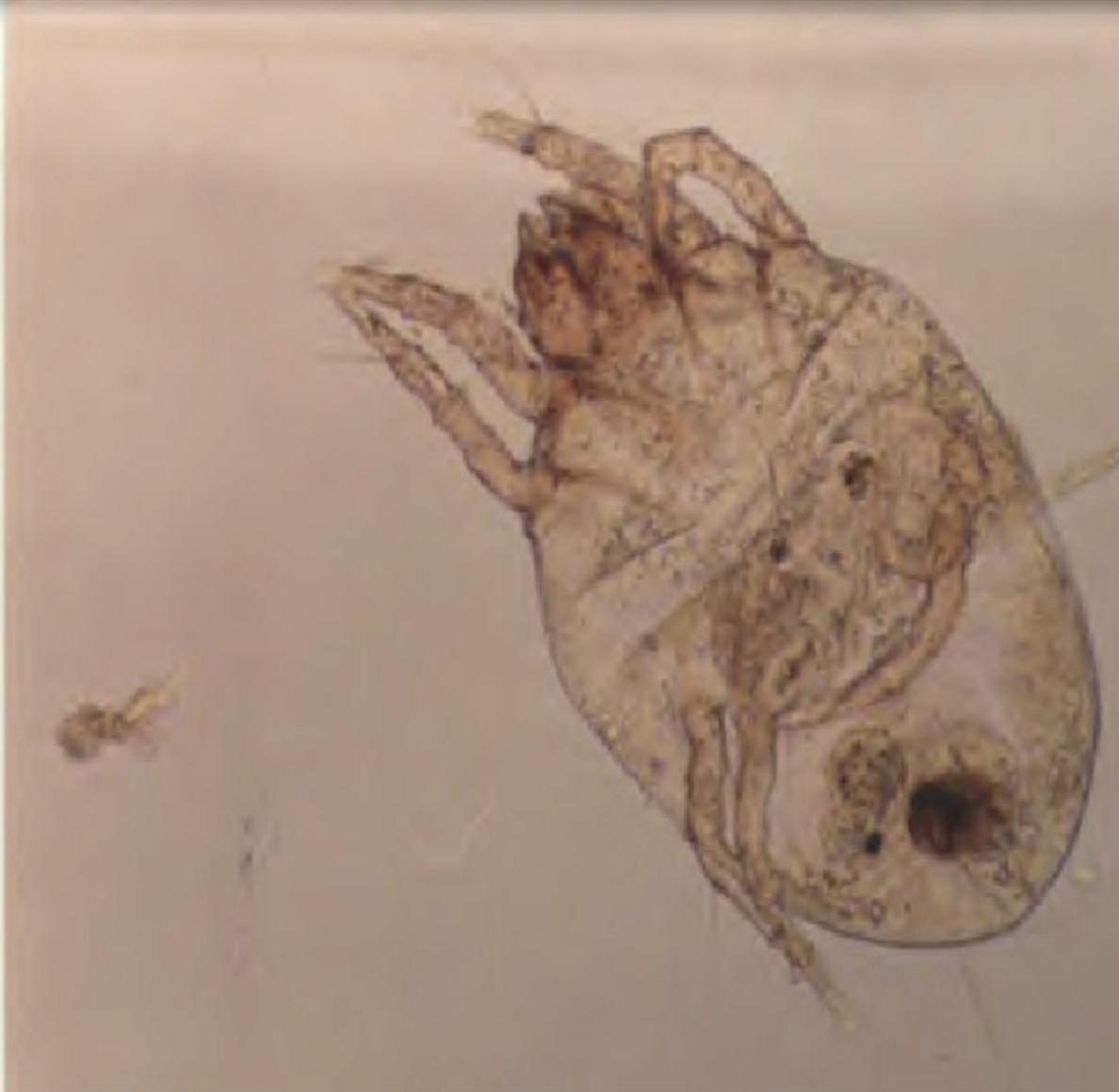
(Mycotech Biological — a private firm focusing on Stachybotrys mold)

www.mrmildew.com

www.home-diagnostics.com

www.healthsurfing.com

Photographs



Dust Mite



Stachybotrys in the Laundry



Stachybotrys Enjoying Drywall



Stachybotrys on the Floor



Stachybotrys



Stachybotrys — The Star of the Show