

HEALTH HAZARDS OF WATER DAMAGED HOMES AND WHAT TO DO ABOUT IT

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There are many adverse health hazards caused by water damaged homes (WDH). There are numerous toxic contaminants which are present in the slime, air and dust of a WDH that pose serious health risks to you and to your family.

Because there are numerous mold species and pathogenic bacteria present in a WDH, it is not possible to identify any one specific causative agent of the health problems that may develop. A WDH contains a toxic soup of material and chemicals, known as biotoxins, all of which, in combination, may cause health issues. Dangerous chemical substances produced by mold and bacteria can lead to a host of medical problems. Together these symptoms are termed **Chronic Inflammatory Response Syndrome (CIRS)**. Individuals who are susceptible to biotoxins found in WDH develop an inflammatory response to these toxins.

Toxic Substances Found in Water Damaged Homes

MOLD – Mold refers to a type of multicellular fungus that grows on organic material in filament form with hyphae and reproduces by forming spores. Mold may grow indoors or outdoors, and thrives in warm, humid environments. Mold spores can be found in any environment. Yeast is a single cell form of fungi. Common molds found in warm, humid environments are *Alternaria*, *Wallemia Sebi*, *Chaetomium*, *Hormodendrum*, *Cephalosporium*, *Helminthosporium*, *Aspergillus*, *Epicoccum*, *Pullularia*, *Rhizopus*, *Curvularia*, *Cladosporium*, and *Penicillium*. *Stachybotrys chartarum*, referred to as “black mold,” is a greenish-black mold that can also be found indoors. *Stachybotrys* grows on household surfaces that have high cellulose content, such as wood, fiberboard, gypsum board, paper, dust, and lint.

MOLD SPORES – Tiny spores, produced by mold, are not visible to the naked eye. Mold spores are very hardy and can survive indefinitely, for decades, under conditions in which mold cannot grow, such as in dry and harsh environments. These spores travel through outdoor and indoor air. When mold spores land on a surface where moisture is present, mold can start to grow.

MYCOTOXINS (MOLD TOXINS) – Mycotoxins are toxic chemicals, produced by mold, present on mold spores and small fragments of mold, that are released into the air.

BACTERIA – Single-cell microorganisms which can exist either as independent, free living organisms or as parasites that are dependent upon another organism for life. Pathogenic bacteria can cause infectious disease. Commensal bacteria live in a symbiotic relation with other organisms and protect the organism from pathogenic bacteria.

ENDOTOXINS – also called Lipopolysaccharides (LPS), are cell wall components of pathogenic, gram negative bacteria. They are released into the environment upon death of the bacteria. Endotoxins cause the

release of inflammatory chemicals in your body, such as histamine and cytokines, which cause an inflammatory response in your tissues. These endotoxins can aggravate existing respiratory disease by causing inflammation in the nasopharynx and lungs. They add to the toxic load in your body.

ACTINOMYCETES – A group of gram-positive bacteria that produce various toxic agents.

MYCOBACTERIA – A large family of bacteria that have unusually waxy cell walls that are resistant to digestion.

HEMOLYSINS – exotoxins produced by bacteria that cause rupture of red blood cells in laboratory studies.

VOLATILE ORGANIC COMPOUNDS (VOCS) – Microbes, such as mold and bacteria, can release volatile organic compounds into the air when there is adequate food supply for such “secondary metabolite” production. These volatile compounds, called VOCs for short, give WDH their distinctive rancid or musty odor. VOCs can activate severe, adverse immune responses in susceptible patients. Mold and bacteria both produce VOCs.

Susceptible individuals who inhale or ingest these VOCs will gradually accumulate them in their brain and eventually may experience symptoms like insomnia, anxiety, panic, rage, paranoia, depression, multiple sclerosis or parkinsonism.

Genetic Susceptibility to Mold Toxins and other VOCs - The HLA-DRBQ Gene

Individuals who have the HLA-DRBQ gene, are more susceptible to mold toxicity. 25% of the population has this gene. Those individuals who carry the HLA-DRBQ gene do not make the antibodies needed to deactivate and detoxify mold toxins.

Those individuals who do not have this gene are not susceptible to mold toxins because their body can properly metabolize, detoxify and deactivate these toxins. This represents about 75% of the population.

Mold toxins have a fatty acid structure and are lipophilic, meaning that they “love fat.” Because the brain has such a high fat content, mold and toxins migrate and are deposited in the brain.

Mold toxins in the brain can destroy neurons and inhibit hormone production, which can lead to a host of adverse health symptoms.

VOCs also cause the release of proinflammatory cytokines in the body which can lead to chronic inflammation and autoimmune disease.

The recent flooding in Texas has created the perfect wet, warm environment for mold and bacteria to flourish and grow out of control. Mold is a fungus that can be found both indoors and outdoors. It will start to grow on damp surfaces within 24 to 48 hours. Mold produces spores that travel through the air. Mold spores can survive dry conditions that do not support normal mold growth. Mold also produces toxins, known as mycotoxins, which can be detrimental to your health. Exposure to mold spores, pathogenic bacteria and mold and bacteria toxic VOCs can lead to a very serious deterioration of your health.

Typical symptoms reported from exposure to biotoxins in Water Damaged Homes (WDH) include:

- **Eye irritation** – light irritation, blurred vision, burning, itching, watery eyes, red eyes (conjunctivitis)
- **Nose and sinus disorders** – runny nose, chronic post nasal drainage and sinus congestion, sneezing attacks, bloody nose, recurrent and chronic sinus infections
- **Lung disorders** – chest congestion, hacking cough, bronchitis, shortness of breath, wheezing and asthma attacks
- **Brain and nervous system** – headaches, memory loss (brain fog), inability to focus, confusion, disorientation, mood swings, dizziness. These symptoms may be caused by the biotoxins, which are volatile organic compounds (VOC), produced by mold and bacteria. They settle primarily in the brain because they are lipophilic, they “love fat,” and the brain contains high quantities of fat.
- **Abdomen** – gastrointestinal distress, diarrhea, heartburn
- **Skin irritations** – rashes, hives
- **Extremities** – numbness, tingling, tremors, joint and muscle aches and pains
- **Generalized fatigue and weakness**

Many of these symptoms are related to an allergic reaction to mold.

 If you begin to experience new or worsening symptoms of poor health, then you should be evaluated at the **HOTZE HEALTH & WELLNESS CENTER**.

Mold and Bacterial Toxins and Fatigue

The cells of your body have power plants called mitochondria which produce electrical energy that drives the biochemical processes within your cells. High energy production increases your metabolism and leads to good health. Low energy production within your cells causes low metabolism and poor health. The mold and bacteria toxins, VOCs, poison your mitochondria and adversely affect your energy production. This is why detoxification is so important when you have been exposed to the toxins found in a WDH. These toxic compounds add to the toxic load of compounds that you already have from the toxins that you routinely get in the air, food, liquids and lotions to which you are exposed on a daily basis. Serious health issues may develop.

A Word About Toxic Black Mold

More serious health problems have been associated with the toxic black mold, *Stachybotrys Chartarum* or *Stachybotrys Atra*. The mold is greenish-black and slimy, resembling tar or black paint. It typically grows only on repeatedly wetted materials that contain cellulose, paper wrapping sheetrock and on ceiling tiles, and on wood. **Toxic black mold also needs materials to be very wet for at least a week before it can begin to grow.** Black mold is commonly caused by leaks inside walls, under floors or above ceilings. Since black mold has the potential to cause severe health problems and can even be deadly, please use the assistance of a professional who is experienced in dealing with black mold. Disturbing dry black mold causes it to release millions of toxic mold spores into your home environment.

White, Gray and Black Water

WHITE WATER

White water is tap water that is safe for drinking. Rain water is initially white water.

GRAY WATER

Gray water includes all wastewater generated in the home, except toilet water, which is considered “black water.” Gray water has not come into contact with solid human waste. This greatly decreases the risk of disease and increases the speed at which it can be broken down and safely reabsorbed into an active garden or lawn.

Unlike white water, gray water may contain soap particles, fat and oil from cooking, hair, and even flakes of human skin. The exact contents of gray water depend heavily on the household producing it.

If the household chemicals in gray water are kept to a minimum, most plants will be able to handle it. You can keep chemical contamination to a minimum by using environmentally friendly, biodegradable soaps and detergents whenever possible.

BLACK WATER

Black water is sewer water which contains human waste that comes from flushing the toilet. Black water is waste water loaded with feces. It is referred to as “sewage” and contains infectious, pathogenic bacteria that can pose real health hazards to you and your family if you come in contact with it. Many of the WDH in Houston were contaminated with black water. Black water also contains a large amount of pharmaceutical chemicals that are excreted by humans who are taking drugs.

Tips to Help Protect You and Your Home from Mold after a Flood

- 1. WEAR PROTECTIVE GEAR** – rain boots, rubber gloves, face mask or respirator mask when entering a flooded home. Avoid even very short exposure to mold without a face mask since you can breathe in the unseen mold spores and mold toxins from the air. The rancid smell in flooded homes is a result of the mold toxins and bacterial toxins that are being released by decaying material.
- 2. EXERCISE CAUTION** in cleaning and disinfecting molds because they release mold spores and mold toxins when disturbed.
- 3. FLOOD WATER MAY ALSO CONTAIN RAW SEWAGE**, black water, that contains pathogenic bacteria and toxins.
- 4. CLEAN UP YOUR HOME AND DRY OUT QUICKLY WITHIN 24 TO 48 HOURS.** For your safety, use a professional service that specializes in remediation of flooded homes.
- 5. WINDOWS** – Leave windows open to help dry out your home and improve ventilation. Use fans to help dry things out.
- 6. “WHEN IN DOUBT, THROW IT OUT!”** Remove all items that are wet from flood water and cannot be thoroughly cleaned and dried.

Existing Respiratory Symptoms Are Made Worse by Mold

Mold spores, mycotoxins and bacterial toxins are especially dangerous for people with respiratory problems caused by allergies or chronic pulmonary disease, so be sure to protect yourself. Mold spores and VOCs can cause irritation and damage to the respiratory tract.

Blood Testing for Genetic Susceptibility to Mold and Bacteria VOCs

Test: HLA DR (Human Leucocyte Antigens)

Lab to Use: LabCorp

Spec: Lavender, room temp

Code #: 167120

DX Codes: 279.10, 377.34, 279.8

CPT Code: 81375

Additional blood tests can help determine if mold exposure is involved in health challenges. These tests include a series of immune inflammatory and other markers commonly out of range in CIRS/Biotoxin Illness as a result of mold/lyme.

- » C4A (Complement 4A)- Indicative of recent biotoxin exposure.
- » TGF-Beta 1 (Transforming Growth Factor) – When elevated it is indicative of long term biotoxin exposure.
- » MMP9 (Matrix Metalloproteinase)
- » MSH (Melanocyte Stimulating Hormone) Low
- » VIP (Vasoactive Intestinal Polypeptide) Low in biotoxin exposed individual
- » ADH/Osmolality (Antidiuretic Hormone) Low
- » AntiGliadin Antibodies - Elevated
- » VEGF (Vascular Endothelial Growth Factor) Low in biotoxin exposed individuals.

The Center for Disease Control (CDC) does not recommend routine sampling for molds. Generally, it is not necessary to identify the species of mold growing in a building. Measurements of mold in the air are not reliable or representative. **If mold is seen or smelled, then there is a potential health risk; therefore, no matter what type of mold is present, you should arrange for its removal.** Furthermore, sampling for mold can be expensive, and standards for judging what is and what is not an acceptable or tolerable quantity of mold have not been established.

There are too many variables impacting results and the sample size is too small for air testing for mold to be reliable. Air sampling's lack of utility in determining the level of mold found in indoor air may be a surprise to some, given the frequent references to these tests in mold litigation. But the limitations of this type of testing were recognized more than ten years ago in the standard text in this field, *Bioaerosols: Assessment and Control* by the American Conference of Government Industrial Hygienists (ACGIH).

Investigators should bear in mind that samples provide information about a site as it existed at the time tested. However, the findings may not represent conditions at a time in the past or future, even the relatively recent past or near future. Changes in the kinds, concentrations, and proportions of biological agents in the air can be rapid and substantial.

New Mold Test Shows Great Promise. ERMI Testing - Environmental Relative Moldiness Index

ERMI is the Environmental Relative Moldiness Index. Based on leading scientific technology, Quantitative Polymerase Chain Reaction (MSQPCR), the ERMI has brought to light the darkness of indoor mold testing.

ERMI is an objective, standardized DNA based method of testing that will identify and quantify molds. ERMI uses the analysis of settled dust in homes and buildings to determine the concentrations of the DNA of the different species of molds. Thirty-six species were divided into 26 species/clusters of molds associated with water damaged buildings (WDB) (Group 1) and 10 common species/clusters not associated with WDB.

The mold index is the difference between Group 1 and Group 2 found in a building. The computer ERMI values are graphed from lowest to highest. The scale ranges from -10 up to 20. The percentages of buildings that fall into different ERMI percentages is shown. For example, an ERMI of 14 is in the top 25% of homes for relative mold burden.

The automated analysis provides for rapid, reproducible results that can be reliably interpreted. For patients, prospective home-buyers, industrial hygienists and remediators alike, ERMI shows great promise for the future.

Vitamins to Help Detoxify Your Body and Strengthen Your Immune System

- » Vitamin D 5000 IU daily
- » Vitamin C 1000 mg/25 lbs. body weight (Ex. 150 lbs. – 6000 mg)
- » Magnesium Citrate or Glycinate 600-1000 mg daily
- » Potent B Complex (Energy Formula)
- » Glutathione 375 mg 2x/day
- » N Acetyl Cysteine 600mg daily
- » Euro Alpha Lipoic Acid 300 mg daily
- » Cholestyramine 9gm 4x/day - *For those who have exposure to mold and bacteria biotoxins from WDH and have developed adverse health symptoms.*

Hormone Replenishment

The replenishment and balance of your natural hormones, using natural bioidentical hormones, is essential to good health as you mature. The key hormones are natural desiccated thyroid hormone, bioidentical female and male sex hormones, and natural bioidentical cortisol to support the adrenal gland when it is fatigued.

How to Get Rid of Allergy Symptoms Naturally

Allergies are an abnormal reaction to normally occurring substances in the environment, such as weed, tree and grass pollens, dust mites, mold spores and animal danders. Individuals may also have concomitant food allergies. The big six (6) food allergies are wheat, corn, egg, milk, yeast and soybean. At **HOTZE HEALTH & WELLNESS CENTER**, we believe in solving the underlying cause of allergy symptoms. Sublingual allergy drops, or drops taken under the tongue, are a safe, effective and convenient allergy desensitization treatment. By building up good blocking antibodies to the allergens to which you react, you can desensitize your immune

system to those substances and actually block the allergy reaction. This allergy treatment is similar to an immunization, and desensitizes you to the allergens. Instead of driving to the doctor's office for weekly allergy shots, you can simply put a few drops under your tongue in the comfort of your home.

WE CAN HELP.

At **HOTZE HEALTH & WELLNESS CENTER**, we believe that instead of masking your allergy symptoms with pharmaceutical drugs, you should correct the underlying cause by strengthening your immune system. We have been successfully treating our guests with allergy drops for decades.

At **HOTZE HEALTH & WELLNESS CENTER** we believe that you need a health coach, a doctor and staff of professionals, who will coach you onto the path of health and wellness naturally, so you can enjoy a better quality of life without using pharmaceutical drugs.

We have helped over 31,000 of our guests get their lives back. We can do the same for you. Isn't it time for you to partner with us, so we can coach you onto a path of health and wellness too? I would like you to consider contacting one of my wellness consultants for a complimentary wellness consultation at **281-698-8698**.

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