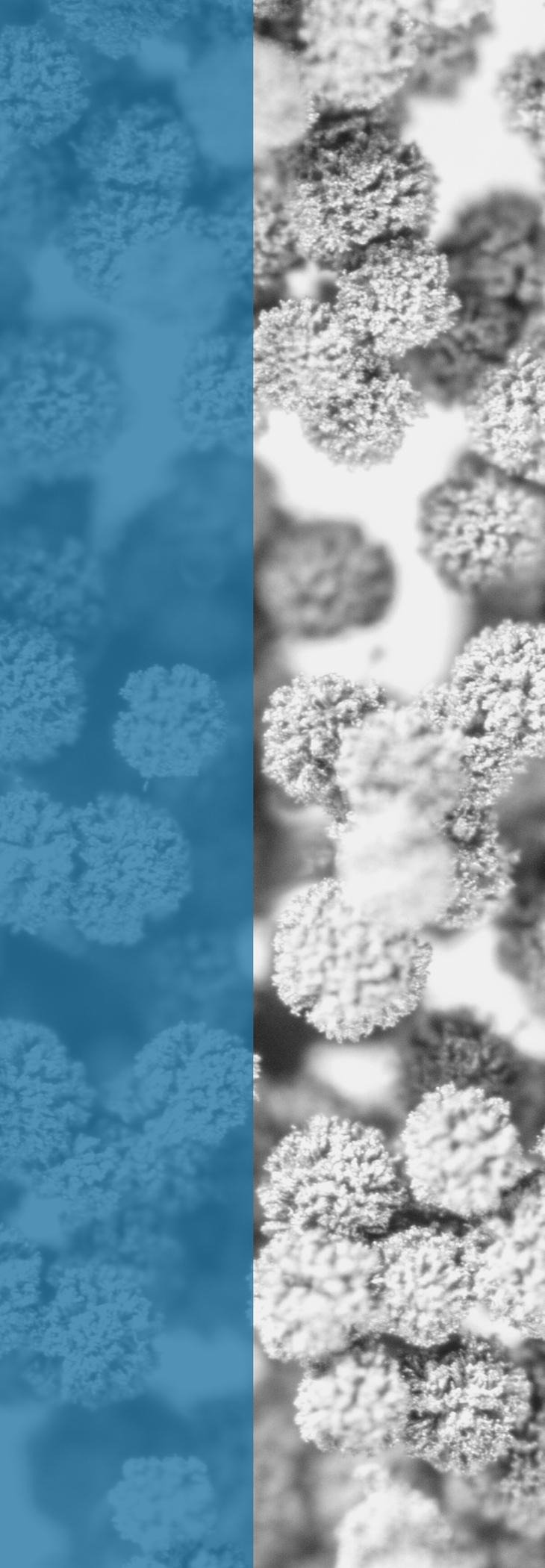


The background of the entire image is a dense field of microscopic mold spores, appearing as numerous small, dark, textured spheres. A semi-transparent blue rectangle is centered over the image, containing the main text and a green leaf graphic.

# Moldy to Healthy

How To Help Your Body And Your Home

A vertical strip on the left side of the page features a microscopic view of mold spores. The spores are spherical and have a highly textured, porous surface. They are arranged in a vertical column, with some in sharp focus and others blurred in the background. The color palette is grayscale, with the spores appearing in various shades of gray against a lighter background.

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## INTRODUCTION

Mary R. came into my office and wearily sat down in her chair. She was frustrated. “I’ve been doing keto for a year and I haven’t lost any weight!” She was seeing me because our office specializes in working with nutrition, but when I started asking her questions, a different pattern started to emerge. She was struggling with fatigue, even though she was doing a great job with her eating. And she had had fatigue issues for years, even though doctors could never find the cause. She had even heard the diagnosis “Chronic Fatigue” bandied about, and wondered if she had it. But there is no test for it, so no one had given her that diagnosis. She had also had pain issues – her back, her legs, her hands – which would sometimes come and go. And she had noticed that she felt “foggy” a lot, which made her worry about memory issues and Alzheimer’s disease.

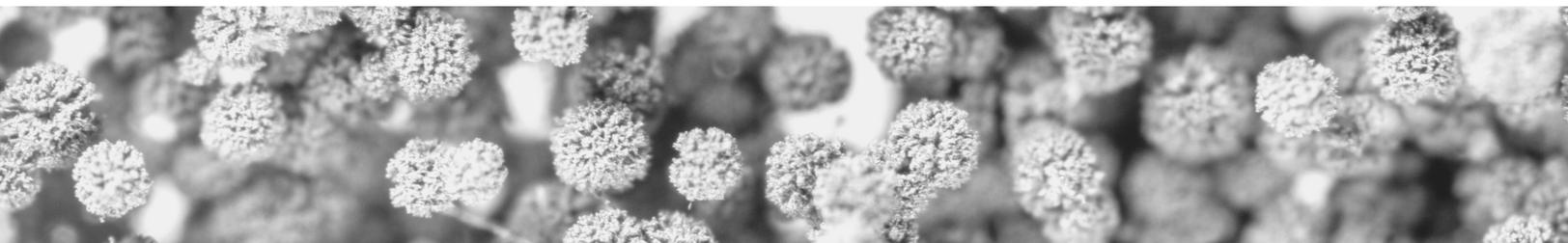
Instead, I asked her some specific questions, did a battery of testing, and it confirmed what I suspected – she had Chronic Inflammatory Response Syndrome (CIRS). When we delved a bit deeper into her health history, she remembered when she started feeling poorly. It had started while she lived in an old apartment which she had moved from 8 years ago. Since starting to feel badly, she had seen doctors at the Mayo clinic and at the Cleveland clinic, and no one could figure out what was wrong. She looked at me a bit suspiciously, when we were going over all her test results a month later, and asked why those doctors hadn’t been able to figure it out. I explained that they probably could have, if they had been trained in recognizing biotoxin illness, as I had. But as they hadn’t, they wouldn’t have known what tests to run or what to do. But thankfully, now that we knew what was going on, there was a way out of the mess of her health. A year later, she feels a million times better – plenty of energy, nothing hurts anymore, her brain works great, and she finally started to lose weight. All because someone recognized what was going on.

# WHAT IS CIRS?

CIRS stands for Chronic Inflammatory Response Syndrome. CIRS is a multi-symptom, multi-system reaction to a biotoxin. It can occur with exposure to mold, a tick with Lyme, a brown recluse spider bite, swimming in an algae bloom, or even from eating fish with ciguatera. Along with a genetic susceptibility, a person can become sick because their body, unable to clear the toxins, creates a chronic inflammatory response.

This chronic inflammatory response can manifest in seemingly unrelated symptoms, causing CIRS to be very difficult to diagnose. The average person has seen between 10 and 20 doctors, and taken many medications and supplements, most of which have not helped. They have been diagnosed with everything ranging from chronic fatigue, fibromyalgia, rheumatoid arthritis, lupus, multiple sclerosis, unnamed autoimmune diseases, depression, or even been told "it's all in your head". Most patients have suffered for years, if not decades, even if they have moved from the environment that initially triggered CIRS.

The original researcher and M.D., Dr. Richie Shoemaker, began to recognize this disease in the mid 1990's and has published dozens of research papers regarding CIRS since that time. You can see those papers, and more evidence of the physiological damage of water-damaged buildings on his website at [www.survivingmold.com](http://www.survivingmold.com). Dr. Shoemaker has established a comprehensive protocol to clear the toxins from the body, stop the inflammatory response, and restore proper regulation of the body systems that are in disarray.



# HOW DID WE GET HERE?

Mold was discussed even in the Bible. Leviticus 14:34-47 says this:

*"When you enter the land of Canaan, which I am giving you as your possession, and I put a spreading mold in a house in that land, the owner of the house must go and tell the priest, 'I have seen something that looks like a defiling mold in my house.*

*'If the mold has spread on the walls, he is to order that the contaminated stones be torn out and thrown into an unclean place outside the town. He must have all the inside walls of the house scraped and the material that is scraped off dumped into an unclean place outside the town. Then they are to take other stones to replace these and take new clay and plaster the house.'*

You probably remember a time when the term "toxic mold" was NOT in the conversation — it all seemed to start in the late 1980's/early 1990's. And that's not a mistake. While there were a lot of steps to get to where we are now, what occurred was that in the 1970's, a chemical called "benomyl" was used as an antifungal treatment in farming. Over time, molds and fungi became resistant and farmers moved on to using other chemicals. But benomyl, for its antifungal properties, was added to house paint, and used in millions and millions of homes.

Additionally, around that time, changes began to be made in how houses were being built. Houses went from being drafty, with single-pane windows, and screened windows and doors that were opened for the fresh air, to houses that



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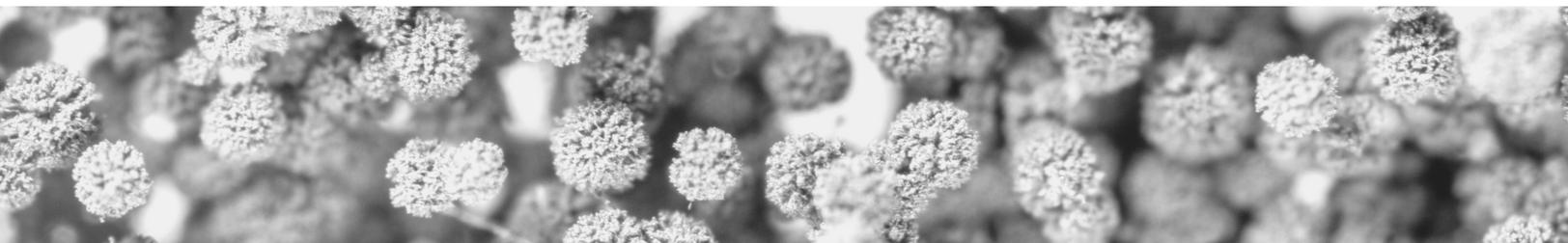
## MOLDY TO HEALTHY: HOW TO HELP YOUR BODY AND YOUR HOME

were designed to be more airtight. This was in an effort to make houses more energy efficient. Additionally, more houses were using central heating and air conditioning and HVAC systems, which required houses to be more sealed.

Add to this the use of sheetrock, which as cellulose, is the perfect food for mold, and then paint that sheetrock with an antifungal that has already shown evidence for creating a resistant form of mold. Let's not forget to include water sources like indoor plumbing for toilets, bathrooms and kitchens. Include poor building practices that leave partially-built houses open to the elements, long before a home buyer moves in, or contractors that do a poor job, knowing they'll be called back to fix it (or not). Furthermore, no quality control exists in the building profession other than a home inspector who may or may not find issues after the fact. Bring all, or even just a couple of these<sup>1</sup> elements together and you have the perfect storm.

It is estimated that more than half of buildings today, both private and commercial, have water damage, leading to a mold problem. <sup>1</sup>

<sup>1</sup>WHO (2009). World Health Organization guidelines for indoor air quality: dampness and mold

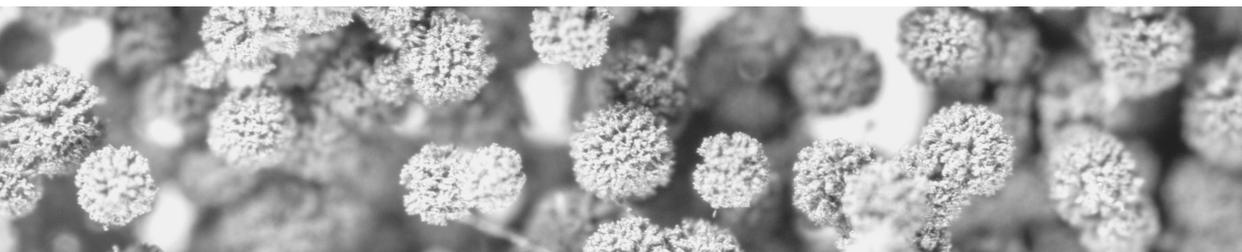


# DOES YOUR HOME HAVE MOLD?

The very first element we have to deal with, when we have a patient with CIRS, is to make sure their home and/or work environment does not have water damage or mold. Any water that has leaked in the house and has been there for more than 48 hours, probably has encouraged mold and dangerous bacterial growth. When we talk with a patient about this, we do a full history of the house, to the best of their knowledge. I ask people to remember if they've ever had a roof leak, a toilet leak, a bathtub that overflowed, a pipe leak of some kind, if their refrigerator or ice maker has ever leaked. We had a patient whose 3-year old had flushed the toilet for fun multiple times and it overflowed into the surrounding rooms. The parents noticed that their closet started to smell musty and hung a bag of coffee in it to offset the smell. Weeks later, when the mom was stepping on the linoleum in the kitchen and water squished out, she realized there was a bigger problem. So take your time, and think back.

Even if your house is new, that does not mean you couldn't have an issue. One of our patients came to us with terrible, debilitating migraines and had two children with health issues. She had inherited her grandmother's house, but the renovation had taken it down to the studs and rebuilt it with new sheetrock, fixtures, etc. But 4 years later, a mold inspector found mold in three different areas, unrelated to each other. The HVAC had been put in incorrectly (and yet passed inspection), flooring had been installed over open holes around pipes, allowing moisture from the slab up into the house, and there had been a leak at the kitchen island that even the mold inspector had not found, but the husband remembered.

*The most common places for mold are the HVAC system, the basement and crawlspace.*



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## MOLDY TO HEALTHY: HOW TO HELP YOUR BODY AND YOUR HOME

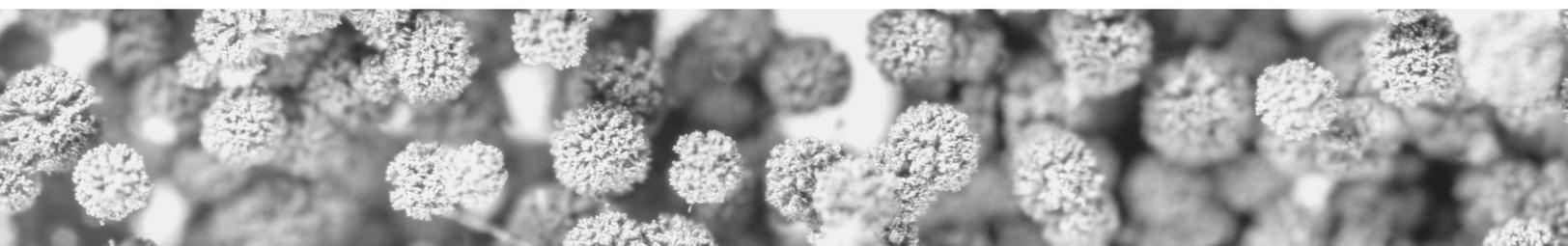
The points below are helpful as you walk around your house, after you've tried to remember all you can about your house. These points will also be helpful if you are looking at moving and want to be able to see quickly if where you're considering has issues or not. To really confirm if a house has mold or not, you have to do some testing, which we'll discuss in a moment. The very first point is that if the house smells moldy or musty, **LEAVE IMMEDIATELY**. This is one of the diagnostic criteria of a moldy house — smell. Same if you see visible mold.

After that, do this physical check:

- Check under each sink for swelling, discoloration or water damage. Look at each window for swelling, discoloration on the sills, or in the paint around the windows.
- Check each door for discoloration of the doorframe, especially at the floor level. Check around each toilet for evidence of water damage.
- Check around each HVAC system for any staining, indicating water damage. Same for the hot water heater.
- Check the basement for any moisture, or staining indicating past water damage.
- Check ceilings for discoloration- i.e. leaks. In built-ins/cupboards look for yellow, brown or orange spots on external walls. Also pull out bottom drawers in built-ins, turn them upside down and look at the backing for evidence of moisture.
- Dryers need to be vented to the outside — check that it does.
- Look at each vent in each room for evidence of mold. Shine a flashlight in if possible.
- Check the intakes for the HVAC system — if possible, remove the outer screen, and shine a flashlight in as far as you can to see if you can see mold.
- If possible, pull out the dishwasher and refrigerator and check for water damage or staining.
- Check the attic for staining of the insulation, indicating water damage.

If possible, ask a maintenance worker or cleaning staff about any issues. Avoid using the word "mold" and ask about flooding, fires and roof repairs.

Do an internet search for flooding in the town or street, as some neighborhoods flood regularly.



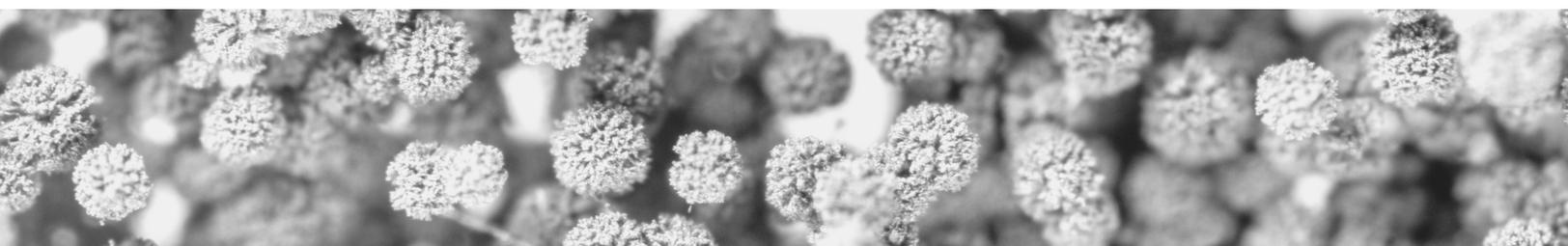
# TESTING

If there is one area where people in the medical and inspection/remediation field disagree, it's in the area of testing. Primarily this is because when someone is sick with CIRS, they are more sensitive to any contaminants in the air, and those contaminants can be at levels that are not picked up by standard industry testing. So let's look at the testing that's out there.

## Air Samples

This is the industry standard for mold inspectors. It is rare for a mold inspector to not include at least 3 of these with an inspection. But there are a few issues. First and foremost, the test was originally designed to do 5-22 samples per room (depending on size of room) to account for "dead air" but like it says above, most inspections don't do more than 3. Air samples are also dependent on what's floating in the air, and typically the sample is taken from air a few inches to 2 feet from the nozzle, so if that's right where the mold is, then great, but if it's not, the sample will be a false negative. Air samples also do not account for species like *Stachybotrys chartarum*, and *Wallemia sebi* (both toxic molds) that do not float in the air, but fall quickly to a surface. After the air sample is taken it is then applied to a Petri dish to grow, so that the type of mold can be identified, which means only alive, whole mold spores are counted here. This does not take into account dead mold and mold/fungal fragments, which have an even more noxious effect on the human body (more on that later).

For someone sick with CIRS, running an air sample test may not be sensitive enough. Let's discuss a better and much more sensitive test. HERTSMI-2 (Health Effects Roster of Type-Specific Formers of Mycotoxins and Inflammagens – 2nd Version) tests for the DNA presence of "The Big 5" known toxic molds.



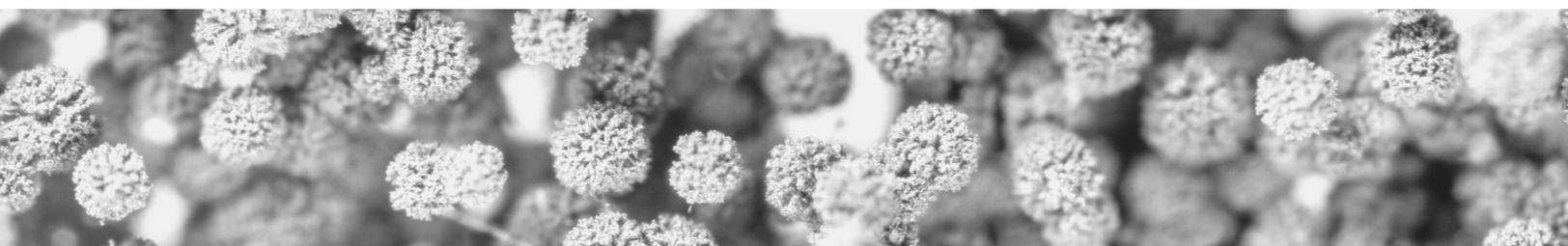
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## MOLDY TO HEALTHY: HOW TO HELP YOUR BODY AND YOUR HOME

Testing for the DNA makes it much more sensitive because the DNA is present also in the fungal fragments. So if, for example, you had a roof leak and fixed it, but in the meantime the mold grew but then dried out, the dried mold spores can break into fragments. The HERTSMI-2 test can test for the presence of live OR dead mold.

It also has some negatives, but usually these can be controlled. It can have an overly high positive number if the sample was wiped or vacuumed directly on mold, or a contaminated object was tested that came from another moldy building. Also, it may be higher if a portion of a room was tested that was closest to the water-damaged area. Sample can also be incorrect (too low) if cat urine ended up on the sample (prevents proper reading of the DNA), if the sample was done on a clay/porous surface (can absorb too much of the sample) like adobe, kitty litter, open windows/doors, dirt road areas, if biocides were used (mold killing chemicals), especially on water-damaged porous surfaces. Additionally, since this is basically testing the dust that has potentially picked up the mold spores or fragments, if dusting and cleaning was done too recently before the test, it will be falsely low. So we tell our patients to not clean or dust for 2 weeks and then take the sample.

If the DNA of a mold shows up on the test, it is definitely present. The HERTSMI-2 test will weight the presence of the 5 toxic molds and tell you if the house is potentially toxic for someone. We want to see the score less than 10. Here is an example of a test that passed:

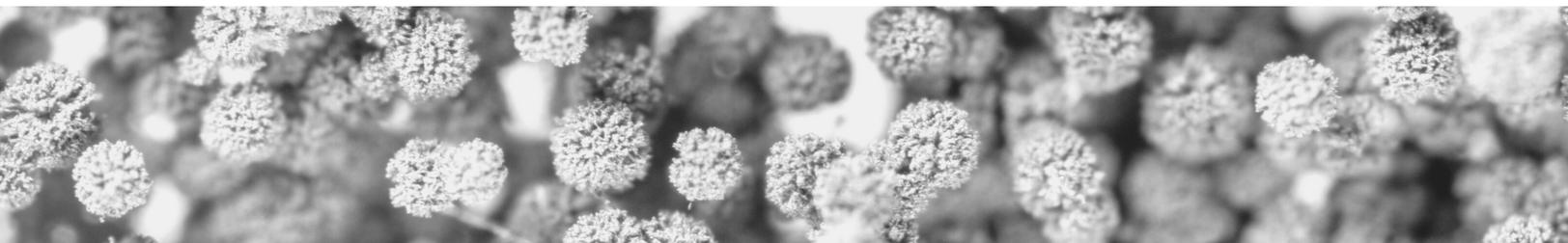


MOLDY TO HEALTHY: HOW TO HELP YOUR BODY AND YOUR HOME

Species	Spore E./mg	Weighting
Aspergillus penicillioides	118	6
Aspergillus versicolor	5	0
Chaetomium globosum	1	0
Stachybotrys chartarum	3	0
Walleimia sebi	1	0
<b>HERTSMI-2 Score =</b>		<b>6</b>

<b>Sample Size</b>	<b>5.1 mg</b>	SE = Spore Equivalents SE/mg = SE/milligrams of sample N D = None Detected
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<b>Color-coded interpretation <sup>10</sup></b>	
If 10 or below	In only 1.7% of cases, re-occupancy of building following mold remediation has led to relapse of CIRS-WDB symptoms.
If between 11 to 15	Borderline. Further remediation and re-assessment is indicated.
If greater than 15	Re-occupancy is ill-advised until further remediation and re-assessment are conclusive.



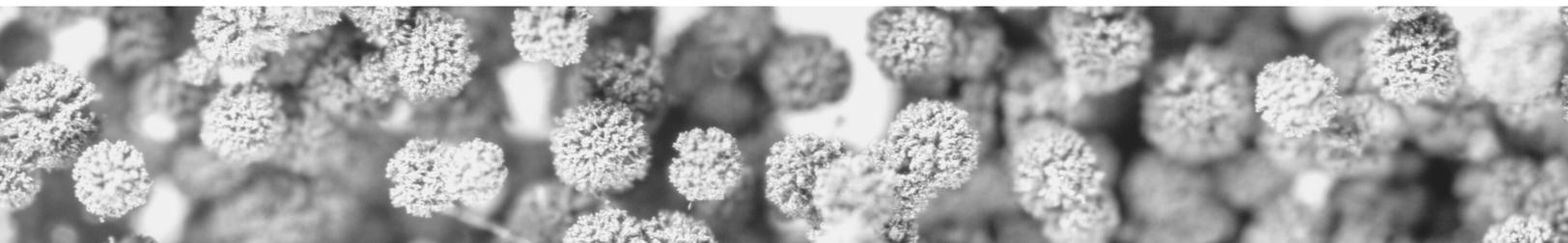
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And an example of a home that failed:

Species	Spore E./mg	Weighting
Aspergillus penicillioides	3,310	10
Aspergillus versicolor	44	4
Chaetomium globosum	8	4
Stachybotrys chartarum	1	0
Wallemia sebi	61	0
<b>HERTSMI-2 Score =</b>		<b>18</b>

Color-coded interpretation <sup>3</sup>	
<b>If 10 or below</b>	In only 1.7% of cases, re-occupancy of building following mold remediation has led to relapse of CIRS-WDB symptoms
<b>If between 11 to 15</b>	Borderline. Further remediation and re-assessment is indicated
<b>If greater than 15</b>	Re-occupancy is ill-advised until further remediation and re-assessment are conclusive.

Mold inspectors typically don't like ERMI tests – either from unfamiliarity, or because they are more expensive and they can't charge for the test, as the lab is paid directly. Nonetheless, the HERTSMI-2 is the best option for detecting toxic mold, alive OR dead, in your home and you can do it yourself.



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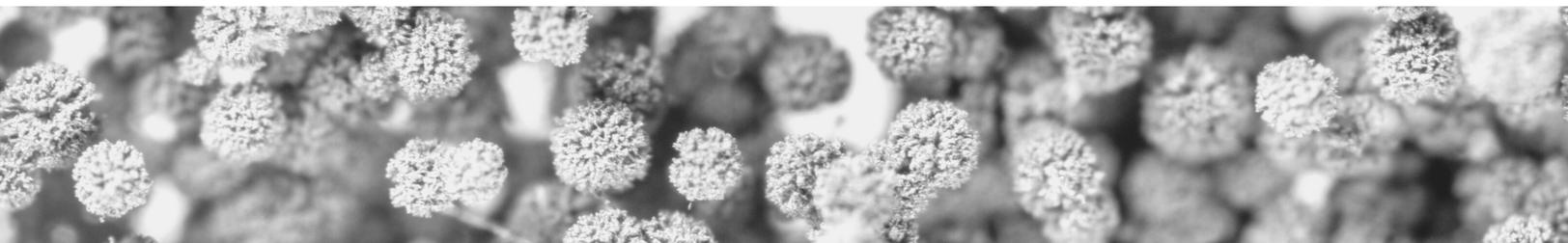
MOLDY TO HEALTHY: HOW TO HELP YOUR BODY AND YOUR HOME

# WHAT TO DO IF YOUR HOUSE HAS MOLD

If the HERTSMI-2 test comes back and your house fails, your next step is to get a licensed mold inspector to inspect your house or workplace. This will hopefully pinpoint where the issue is and this dictates the next steps.

Licensed mold inspectors are not all the same, and the licensing requirements vary from state to state. If the state requires licensing, make sure they're licensed. If no licensing is required in that state, ask what other certifications the inspector has. When choosing an inspector, ask them about these points. They should be familiar with the terms and be able to speak to each one. A good mold inspector should:

1. Conduct a background interview to understand your concerns and attain a water intrusion/moisture history of the home.
2. Conduct a thorough visual inspection of the entire home. This should take about 1-2 hours for a home of 2,000 square feet, depending on issues encountered and cost around \$400-\$700 or so. This includes attics, crawlspaces, HVAC vents and air handler, under sinks and around the exterior of the home (Be aware that if the location has a lot of issues or the client asks a lot of questions, it will take longer).
3. Be capable of taking air (spore trap) and surface (tape, swab or swipe) samples. However, the sampling is not a substitute for the visual inspection. They should go hand in hand.
4. Be equipped with a moisture meter (which measures water content in walls and floors), humidity meter (hygrometer), and a flashlight.
5. Take photos, write up a detailed report, and include the photos in that report. For example, if the wall under the window has enough dampness that the humidity reader registers it, the inspector should take a picture of the humidity meter's reading with it touching the wall. This report is the initial "prescription" for the remediation and is not the full report for the remediation — that is a separate report.



## MOLDY TO HEALTHY: HOW TO HELP YOUR BODY AND YOUR HOME

Remember that showing them the HERTSMI-2 test may not help them if they are unfamiliar with the test, but if it shows a large presence of toxic mold, then either the live mold or dead mold fragments are present. The problem is that most mold inspectors are only able to find live mold – they are looking for current moisture issues and places where there has been water or water leaks. If the mold has dried, it will be very difficult for them to find.

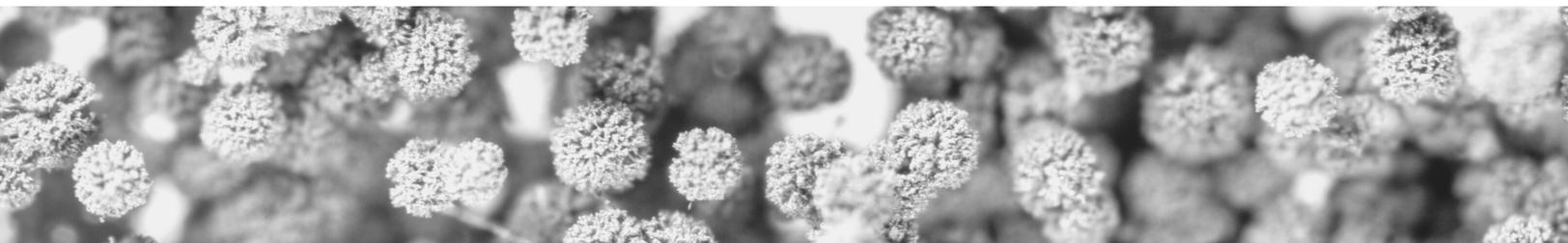
Other things to keep in mind:

- Does the inspector talk about “killing” the mold with fogging, bleach or other toxic chemicals? The goal should ALWAYS be to remove the mold by discarding or cleaning mold affected materials. ALWAYS.
- Is the inspection company the same company that will be performing the remediation? It is better if these two entities are separate and in some states, this is required by law.
- In some states, the mold inspector is not allowed to open the plenum of the HVAC system, nor the air handler. If any mold or water damage is seen by the inspector, a licensed HVAC professional should address this.
- Be aware that mold inspectors, for the most part, will only inspect areas they have access to. Make sure all areas are cleared of excess clutter and/or debris to ensure that all areas can be thoroughly inspected. Remove everything from underneath the sinks, pull out stuff from the closets!

The next step is to bring in a specialized mold remediator. DO NOT CUT CORNERS ON THIS STEP. This means don't use a contractor or your cousin who says he can do it for cheap. A licensed mold remediator has to manage removing the affected parts WITHOUT carrying this mold all through your house. So they “seal off” the

## **A HOUSE INSPECTION IS NOT A MOLD INSPECTION**

*Additionally, a house inspector who used to be a mold REMEDIATOR is not a mold inspector. Keep in mind that a good mold inspection should take close to 2 hours. It is impossible to do both a home inspection AND a proper mold inspection in the same visit.*



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## MOLDY TO HEALTHY: HOW TO HELP YOUR BODY AND YOUR HOME

and as they remove pieces of the wall, etc. they will bag it, wipe it down, and take it outside, all in an effort to prevent mold spores from spreading throughout your home.

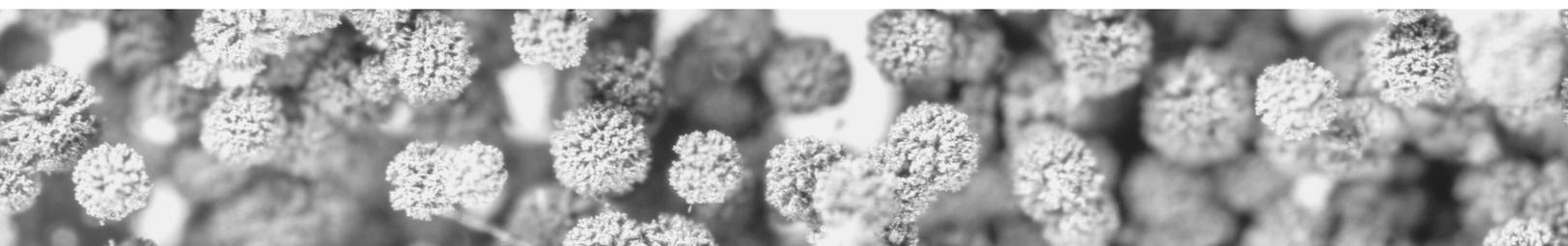
The Environmental Protection Agency says: "The remediation plan should include steps to fix the water or moisture problem, or the problem may reoccur. The plan should cover the use of appropriate Personal Protective Equipment (PPE) and include steps to carefully contain and remove moldy building materials to avoid spreading the mold." At no point should there be ANY plan to "kill" the mold, or use a fungicide.

Let's discuss why.

If you don't water your favorite houseplant for long enough, it will die and the leaves will shrivel and dry up. At some point if you touch the leaves, they crumble into pieces. The same thing happens to mold. If it dries up and dies either because it has lost its water source or someone sprayed a fungicide like bleach, etc. on it, it can break into fungal fragments. How many? This study<sup>2</sup> used living mold that they cultured on building materials. One of the first things the researchers noticed is that killing the mold with a fungicide caused the spores to break down into 400-500 fragments. This study also showed that those fragments would go deeper into the lungs, causing more of an immune reaction, and at 230-250x the amount compared to spores. Fungal fragments also travel in air much more easily than heavier spores. Remember that typical air sample mold tests will not register fungal fragments, only the HERSTMI-2 test (and the more expanded version, the ERMI test).

When a mold remediator finishes the remediation, they have to run tests to make sure there's no more mold. Again, they will typically run air samples. Again, this will only pick up mold spores, not mold fragments. So if someone has CIRS, what should they do?

<sup>2</sup> Pestka, James J., et al. "Stachybotrys chartarum, trichothecene mycotoxins, and damp building—related illness: new insights into a public health enigma." *Toxicological Sciences* 104.1 (2008): 4-26.



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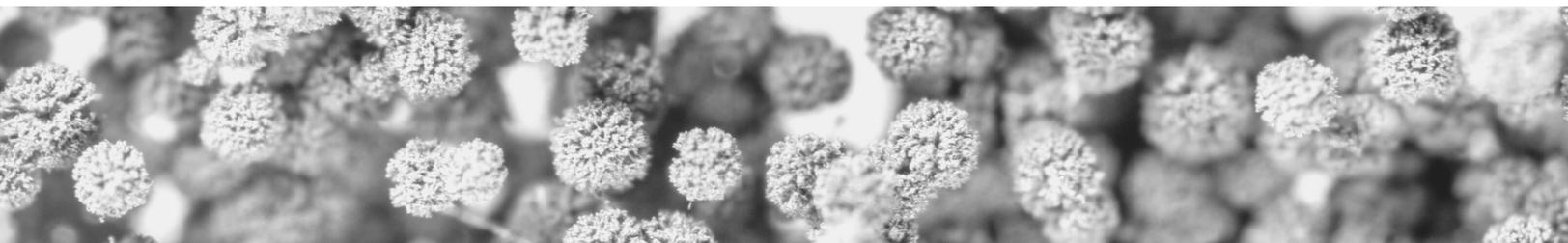
## MOLDY TO HEALTHY: HOW TO HELP YOUR BODY AND YOUR HOME

Ideally, both during the remediation (usually once), and again at the end, the remediator should use a special fog that makes particles heavy and fall out of the air to a surface. This is a vital step, especially for someone with CIRS.

Then all the surfaces get wiped down with microfiber cloths and a weak alcohol solution (a 10% solution of alcohol – vodka or everclear is fine). Damp-wipe first, then dry wipe. Wash cloths afterwards, or use disposable cloths

### In Summary

1. Run a HERSTMI-2 test (available at <https://www.enviobiomics.com/> )
2. If it fails, bring in a mold inspector.
3. Do remediation ONLY by "catch and release" – containing and removing affected materials.
4. Fog to remove particles from the air and then wipe down surfaces to remove those particles.



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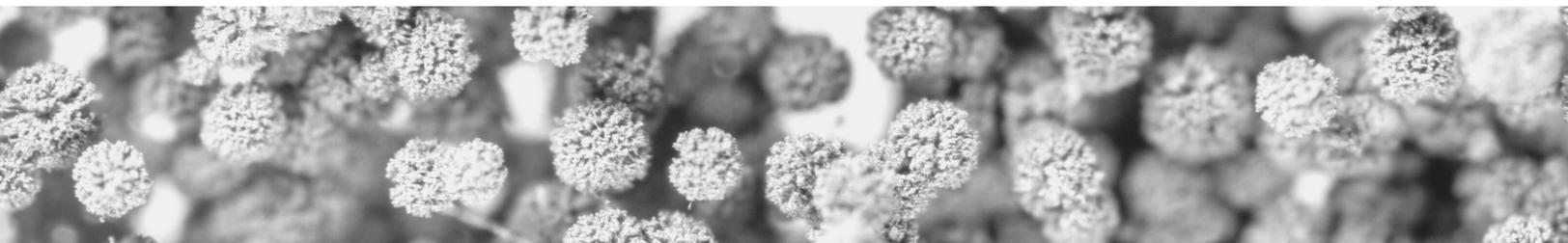
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# SHOULD I GET AN AIR FILTER?

While a good air filter will help you clear the environment of both spores and fungal fragments, the underlying condition causing the mold **MUST** be addressed. However, good air filters can be worth their weight in gold, as they can make a huge difference in removing particles in the air, preventing them from giving you issues. You'll notice the difference just in how much less dust you have in your house!

There are many, many different air filters on the market. The best ones will have a HEPA filter, or ultra-HEPA filter, additional filtering (like charcoal), and ionization, which helps particles drop to a surface. A silent motor is pretty vital. Some filter smaller areas, like 600 square feet, and others do 2000 square feet. What you want to avoid is anything that has UV lights to "kill" mold, since that creates those fragments that are so damaging. Avoid ozone, as it will be damaging to your lungs, and also your pets and plants. Also, avoid anything that says it's "killing" bacteria and viruses and mold on surfaces. What it is referring to is the release of a toxic agent to do that (even if it breaks down to something non-toxic). Again, you want to avoid anything that kills mold, to avoid creating fungal fragments.

The best one we found is [Air Doctor Pro](#). This link will give you a significant discount on its full price. We like it because it has a sealed ultra-HEPA filter (filters to .03 microns, rather than to just 3 microns), a second charcoal filter, and also ionizes. Additionally, it filters up to 2000 square feet. Compared to everything else on the market, it includes better filtering, for a larger space, and with the link, for the best price.. We'd recommend signing up for the auto-shipment of the filters, so that it is easy to maintain your air quality.



# HOW TO PREVENT MOLD

At this point, you're probably asking yourself, OMG how do I avoid this from ever happening? Here are the basics:

Mold only grows in the presence of water/moisture. So make sure the humidity in your house is around 50% or lower. You can easily find this out by buying a humidity meter online — the ones we sell to patients are \$3. The newer electronic thermostats like Nest also measure humidity. Mold will grow on a wall if the humidity is over 60%!

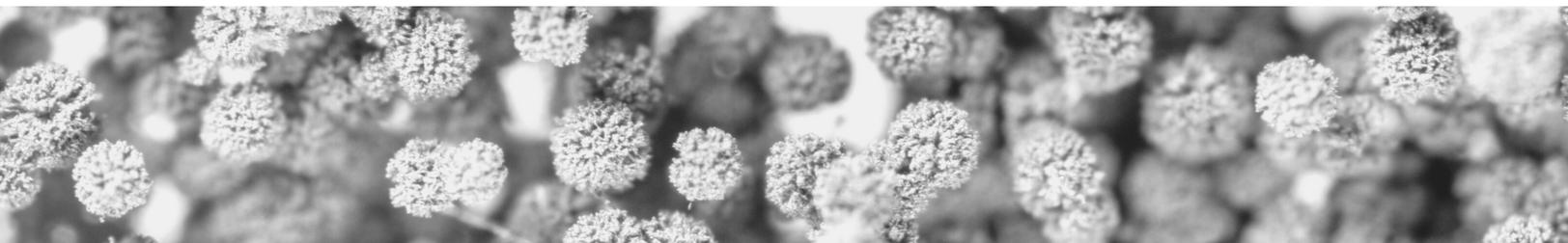
If the humidity is too high (over 55%) and running the air conditioner more is either too cold or too expensive, then a dehumidifier is recommended. Get one with a pump that self-empties into a sink or bathtub. Two-story homes might need one upstairs as well, as humidity rises with heat.

Learn to close the doors and windows, not only for very hot or very cold weather, but also when outdoor humidity is higher than indoors.

Always run the vents in the bathroom. We recommend installing timers on the switches to allow them to run for 30 minutes.

If you have a leak or water damage, **GET IT HANDLED IMMEDIATELY**. One patient we had knew enough about construction that even when they had a leak, he immediately ripped open the sheetrock and pointed industrial fans at it to dry it out. You can also drill 1-2" holes along the bottom of the sheetrock and point the fans there to dry out the inside of a wall. But **DO** have a professional come in to assess **ASAP**

.Run a HERTSMI-2 test once a year just to make sure nothing is happening that you don't know about.

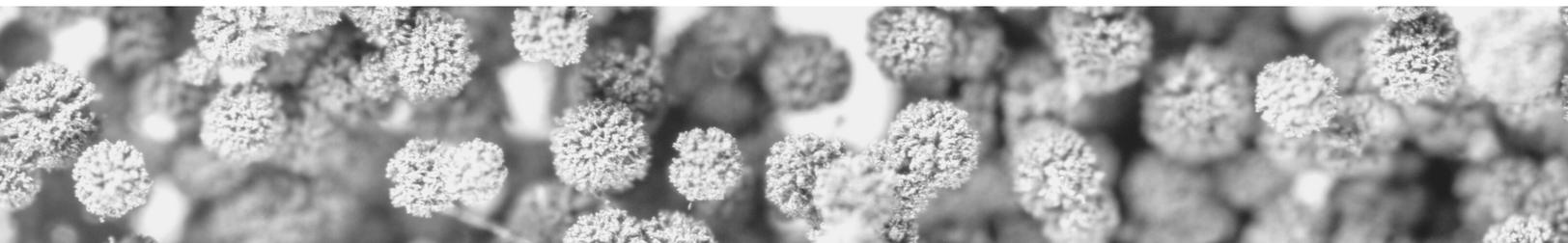


# DO YOU HAVE MOLD ILLNESS?

Carrie S. (not her real name) was a 36-year old mother of three when she came in. She had a file 4 inches thick of all the lab tests that had been run by the 14 different doctors and specialists she had seen. She had been diagnosed with an unspecified autoimmune disorder, Chronic Fatigue Syndrome, Fibromyalgia, depression, and allergies. Several of her doctors had simply referred her to someone else when they couldn't find anything wrong with her. She had even gone to the famous Mayo Clinic, where they confirmed the diagnosis of Chronic Fatigue Syndrome, but didn't have any better treatment or advice to give her. Then her friend, who had CIRS and was being treated by our clinic, told her to come in.

In her first visit, we did two screening tests which confirmed for me that she had Chronic Inflammatory Response Syndrome. The first test is a Symptom Questionnaire. CIRS is characterized as a multi-symptoms, multi-system disease, meaning that it causes a multitude of symptoms, and it affects multiple different systems in the body. So, for example, a CIRS patients will often have sleep issues, pain issues and hormonal problems. If they see a doctor who specializes in hormones, and a test is run, they commonly have low testosterone. For a doctor not trained in CIRS, it seems obvious to give testosterone as a treatment. However, the root problem is CIRS and the patient will often not feel better taking testosterone. Same thing if they see a sleep doctor or a specialist in pain — the root issue is something else, so any treatments given won't help. Hence the experience of going from doctor to doctor to doctor.

While there are many more symptoms than what are included on the table below, these in particular are seen by many patients with CIRS. For example, it's very common to have insomnia, as the hypothalamus becomes dysregulated. Other symptoms from a dysregulated hypothalamus include low testosterone or



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## MOLDY TO HEALTHY: HOW TO HELP YOUR BODY AND YOUR HOME

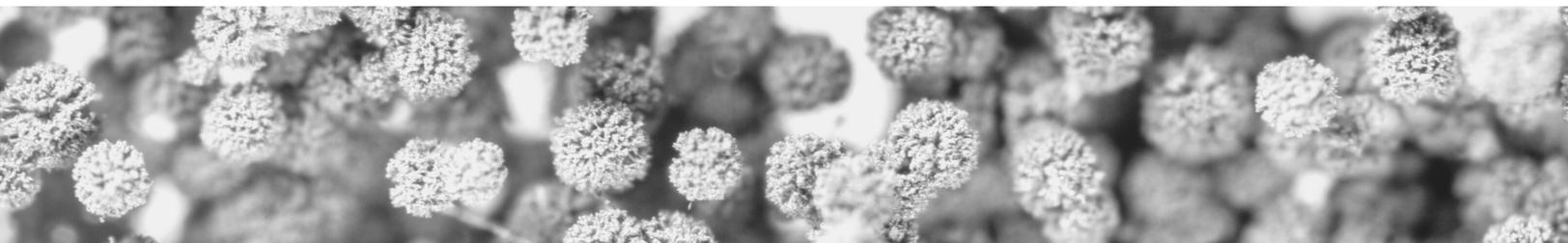
or other sex hormones. Endorphins, which help you manage pain, are affected, so often people have chronic pain issues. Leaky gut and IBS (irritable bowel syndrome) can be part of CIRS. You can have water imbalance issues, which can manifest as increased thirst, excessive urination, swelling, or muscle cramps. Inflammation can cause issues all over the body — frequent headaches, flu-like symptoms, fatigue, muscle aches. For some people, weight gain, or an inability to lose weight can happen with leptin resistance from the hypothalamus dysregulation. You can even have frequent bruising or nose bleeds! But one of the most impactful areas is in the realm of brain health. CIRS causes problems with brain fog, memory, word recall, and concentration — so much so that people are diagnosed with cognitive decline or Alzheimer's, all coming from neural inflammation coming from CIRS. In our practice nearly every cognitive decline patient has had CIRS. It is so prevalent that we screen for that first when someone complains of memory issues!

A susceptibility to illness also occurs, and one of the ways this can manifest is in a colonization of a multiple antibiotic resistant form of Staph in the sinuses (called MARCoNS — multiple antibiotic resistant coagulase negative Staph). This is not an infection, and will NOT necessarily result in noticeable sinuses issues.<sup>2</sup> In the normal population, this occurs approximately in 1.5% of the population. But in people with CIRS it's higher than 80%. And left untreated, it increases inflammation and will prevent you from getting well. It requires special treatment because it is resistant to most antibiotics and it "hides" under a biofilm, which needs to be broken down to "get to" the Staph.

### A Side Note Here

It is highly recommended that you start working with a Shoemaker-trained CIRS specialist ([www.survivingmold.com](http://www.survivingmold.com)) so that you don't waste more money or time than you already have. A Shoemaker-trained practitioner knows which tests are valid and backed by research and which ones are not. They know the order in which to treat everything, and how to restore full function back to your brain, hypothalamus and the rest of your systems.

As an example, some practitioners recommend a urine test for mold. It's expensive, and so inaccurate that the Centers for Disease Control has a [whole page](#) on its website pointing out the flaws of urinary mycotoxin testing. These



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## MOLDY TO HEALTHY: HOW TO HELP YOUR BODY AND YOUR HOME

practitioners mistakenly believe that people have mold in their bodies, releasing mycotoxins, or that they inhaled the mold from a building and it's now in their bodies. There is absolutely zero evidence of that, and a HUGE amount of evidence showing that the damage from a water-damaged building is inflammatory, not infectious.

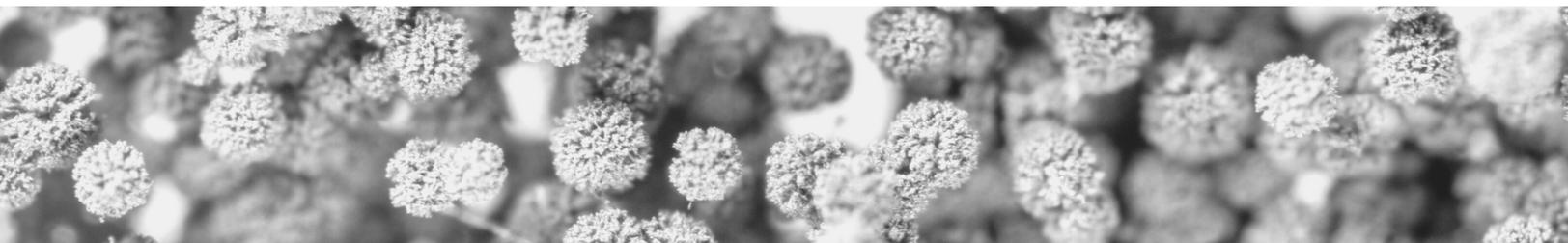
Nearly every one who takes that test shows up "positive" for mold, but primarily because there is mold in food, so it causes a false positive. Mold in food does not cause CIRS. What causes CIRS are two things:

1. An exposure to a biotoxin (in this case, mold, bacteria and other toxins from a water-damaged building)
2. A genetic susceptibility to being able to clear mold toxins and the other biotoxins

The inability to clear the toxins causes this inflammatory reaction in the body, which THEN causes the hypothalamus to get dysregulated, etc. resulting in a multitude of symptoms, from multiple SYSTEMS having issues.

2

Urinary mycotoxin testing is completely invalid. DO NOT waste your money on them! And don't let someone talk you into doing one. Instead, see what testing you SHOULD do.



# SCREENING FOR CIRS

When someone comes in thinking they already have CIRS, or they are someone with multiple problems and we suspect they have CIRS, we first do a screening test and have them do another at home.

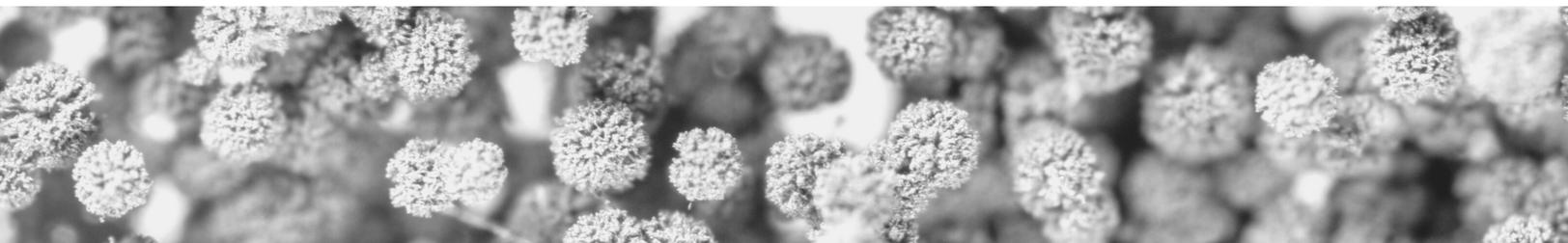
## [Symptom Questionnaire](#)

Dr. Shoemaker researched CIRS symptoms, put these into clusters and saw that statistically this could identify CIRS. Its accuracy for identifying CIRS versus other medical conditions allowed it to be granted a patent

As you look at this table below and begin to ask yourself these questions, you want to be coming from this context: More often than not, do I have this symptom? So, for example, if you get headaches but it's once or twice a month, that's not more often than not. If you get headaches every other day, however, then yes.

The second thing to consider, as you go through this questionnaire, is that many people (especially women) have a tendency to minimize their symptoms. "Sure, I'm tired but it used to be so much worse!" or "Yes, I have some memory issues, but isn't that normal when you get older?" **DO NOT MINIMIZE YOUR SYMPTOMS.**

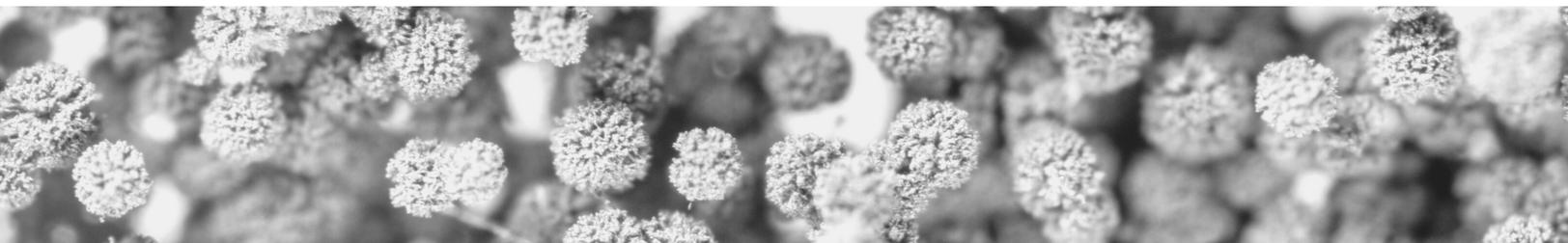
Take a piece of paper and note the number of symptoms and also the number of clusters. For example, the symptom of Fatigue is 1 symptom, and 1 cluster. Memory Impairment and Decreased Word Finding are 2 symptoms, but 1 cluster. If you have headaches and nothing else in that cluster, it's 1 symptom, 1 cluster. Make sense?



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<b>CIRS Symptom Clusters</b>		
Fatigue		Red Eyes
Weakness	Unusual skin sensitivity	Blurred Vision
Decreased assimilation of knowledge	Tingling	Sweats (night)
Aches		Mood Swings
Headache		Ice-pick Pain
Light Sensitivity		
Memory Impairment	Shortness of breath	Abdominal Pain
Decreased Word Finding	Sinus congestion	Diarrhea
		Numbness
Difficulty Concentrating	Cough	Tearing
	Excessive thirst	Disorientation
	Confusion	Metallic Taste
Joint Pain	Appetite Swings	Static Shocks
AM Stiffness	Difficulty regulating body temperature	Vertigo
Cramps	Increased urination	

Cluster table © R.Shoemaker



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It is considered borderline if you have 6 clusters, and positive if you have 8. For children, it is considered positive at 6 clusters.

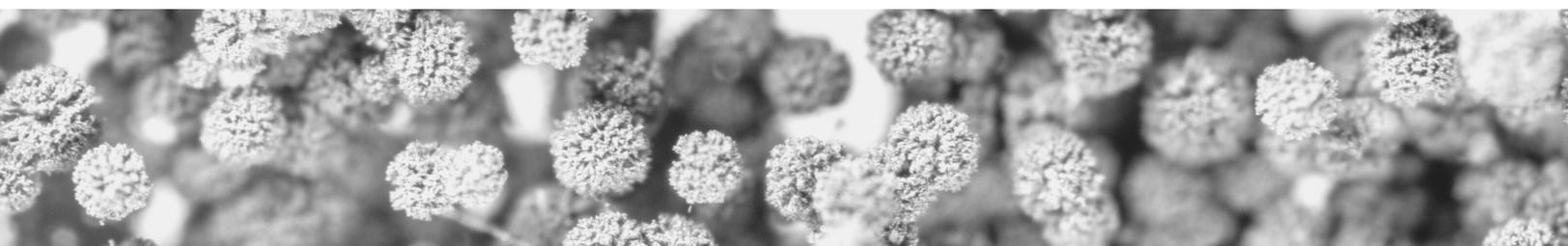
### [Visual Contrast Sensitivity Test](#)

The next test is a Visual Contrast Sensitivity Test (VCS). When someone has CIRS, the toxins in their body affect the optic nerve and it causes an inability to see contrast very well. They might not notice any changes in their eyesight (this is not a vision test) but the ability to see the difference between the dark lines and the light.

It costs \$15 to do online and you can access that test here: [Visual Contrast Sensitivity Test](#)

If you "fail" both of these tests, it is considered 98.5% positive that you have CIRS

Sometimes people take this as bad news, but many more of our patients think it's great news, since now they are starting to get proof that they have an issue that up until now, has remained undiagnosed.

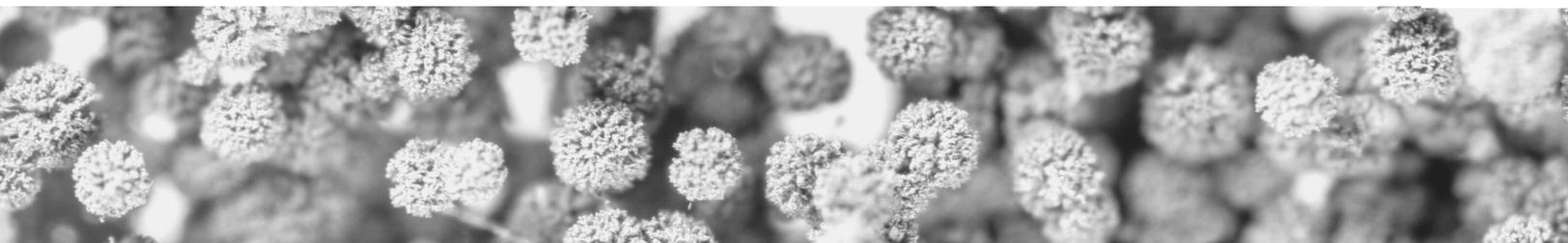


# WHAT CAN YOU DO

First things first, if your house has been tested and has a problem, it needs to be remediated. How will you get better if you don't do that? It's like trying to fill a bucket with a hole – impossible. **THE MOST IMPORTANT FIRST STEP IS TO MAKE SURE YOU ARE IN A MOLD-FREE ENVIRONMENT.**

The second step is to get some more testing. Like we mentioned, urinary mycotoxin testing, while easy to do, is not just expensive, but a waste as it's considered invalid even by the CDC. A good Shoemaker-trained practitioner will never use that test. Instead, the tests to run are blood tests looking at the **IMPACTS** of all the toxic by-products of a water-damaged building (or other biotoxin). We are including these tests and their codes if your doctor can run these. Some of them can be difficult to get.

Diagnostic Tests	Lab	CPT Code
HLA-DQ/DR	LabCorp	81375
Alpha MSH	LabCorp	83519
MMP-9	LabCorp	83520
VIP	LabCorp	84586
ADH/Osmolality	LabCorp	83930; 84588
TGF- $\beta$ 1	Quest -> Cambridge Biomedical	91238
C4a	Quest ->National Jewish	86160; 19956
ACTH (Must be done w/ Cortisol)	Quest	82024
Cortisol	Quest	82024
Hormones		
DHEA	Any Lab	
Testosterone	Any Lab	
Estradiol	Any Lab	
VEGF (plasma)	Quest or Labcorp	



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## MOLDY TO HEALTHY: HOW TO HELP YOUR BODY AND YOUR HOME

This is the basic testing that a CIRS-proficient provider will order. Of course, your doctor needs to rule out other medical conditions first.

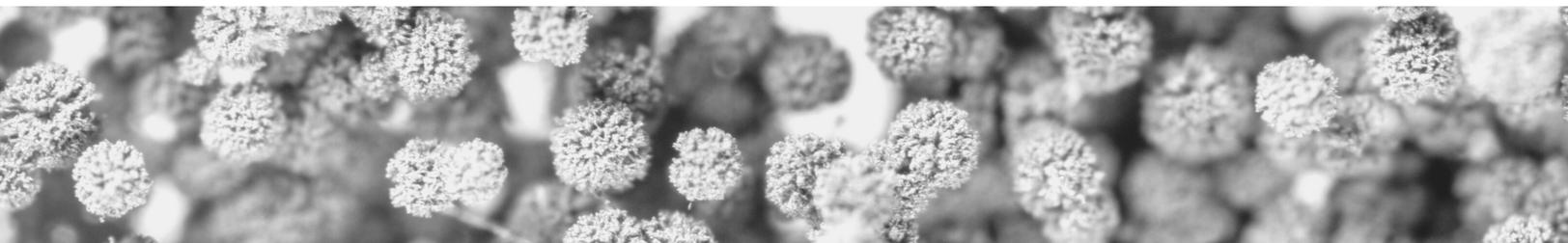
We often get asked why there isn't a blood test for mycotoxins. The reason is that there are over 30 classes of toxins in a Water-Damaged Building, of which mycotoxins are only one. Other biomolecules and toxins cause and contribute to an inflammatory reaction, like beta-glucans, liposomal polysaccharides (LPS), endotoxins, and actinomycetes, as well as others. It's impossible to develop a test for each of these, especially if these are not present for everyone. Instead, properly testing the inflammatory reaction markers will allow us to also see the improvement when the person gets better.

Additionally, a nasal swab for MARCoNS needs to be performed. This is vital, as the resistant Staph increases inflammation and drives down MSH levels, which will prevent healing. **DO NOT BYPASS THIS STEP.** As this is a deep nasal swab, it needs to be done by a medical practitioner and not at home. A patient who came in to us did it at home, tested negative, but then tested positive when we took the sample in office.

This is where it's important to work with a Shoemaker-trained practitioner — these specialized tests aren't simply in or out of range. Several of them have ratios and relationships to each other, so these need to be calculated by the practitioner, and THAT information tells us if there is an issue or not. For example, Melanocyte-Stimulating Hormone (MSH) has a range in some labs from 0-80 pg/mL. However, if it's below 35 pg/mL, it shows inflammation. Anti-diuretic hormone is in ratio to osmolality and there are six ways it can become dysregulated. So make sure someone familiar with the testing applies the correct calculations.

All of this data is compiled for the practitioner to see if there are a minimum number of positive lab tests, combined with the VCS test and symptom questionnaire, leading to a positive diagnosis.

Then treatment can start!



# FINAL WORDS

The man who first began to recognize this disease spent much of his medical career having his knowledge and expertise being called into question for “stepping outside the box”. For over 25 years, he saw patients who had been poisoned with algae blooms and then with mold illness and Lyme. He started to document similarities, started to recognize some foundational issues,, and when testing was available, was able to confirm Chronic Inflammatory Response Syndrome. Dr. Ritchie Shoemaker is a pioneer in his field and he now trains doctors in how to recognize and effectively treat CIRS. We are indebted to his knowledge and courage.

In our practice we have seen, over the decades, how a sensitivity to gluten was first thought to be a fad, and then the medical field often thought people were making up their illnesses, and finally testing and science caught up. We now know that gluten causes many issues for many people, not just people with celiac disease. We suspect mold illness and CIRS will follow the same trajectory, and that in the near future, there will be an increased awareness of mold, building practices, and health issues. Until then, we will continue to recommend and hope that other medical practitioners will be trained in the Shoemaker Protocol, and we will support patients in their mission to get well.

