

AWARENESS of mould's effects on health is been increasing. However, what is not so well known is that a certain gene can make some people more susceptible to these biotoxins lurking in our environment.

"Mould illness" is the general term for a more complex issue called chronic inflammatory response syndrome (CIRS). CIRS was defined by Dr Ritchie Shoemaker as "an acute and chronic, systemic inflammatory response acquired following exposure to the interior environment of a water-damaged building with resident toxigenic organisms, including, but not limited to, fungi, bacteria, actinomycetes, mycobacterium and inflammagens." Everyone can become sick from over-exposure to these biotoxins, however most will recover once exposure is removed. Some people though, are genetically predisposed to becoming sicker from these toxins because they have an immune response gene called HLA-DR which prevents biotoxins from being detoxified by the body: this ultimately leads to CIRS. It's estimated that one in four people have this genetic mutation.

Should we be concerned? The short answer is "yes", because biotoxins are extremely common. Water-damaged buildings are a major concern, as mould can grow in these environments in 24–48 hours. But as much as water damage is a primary concern it's not the only one - biotoxins (including mould) can also grow in environments that aren't water-damaged. Shoemaker has linked multiple different biotoxic microorganisms to CIRS. These include: fungi, bacteria, actinomycetes, mycobacteria, mould and mould spores, endotoxins, inflammagens (compounds that contribute to inflammation and oedema), beta-glucans, haemolysins (exotoxins produced by bacteria capable of destroying cells), and microbial volatile organic compounds (what give basements that distinctive musty odour).

Testing your home

It's important to test your home for mould; however, many inspectors will simply look for mould visually and take an air sample that does not identify different biotoxins; this is important because the different biotoxins will have different effects on health. Air sampling only collects a small sample from directly around the device used. This is a problem, because mould spores have different molecular weights and some do not remain airborne for long.

The best type of testing is called the Environmental Relative Mouldiness Index (ERMI) test, which was developed by the US Environmental Protection Agency and determines the relative "mouldiness" of a home compared to a group of reference homes that don't have mould. The ERMI test has been studied and validated

Symptoms of CIRS

There is a very wide range of non-specific biotoxin accumulation symptoms, which can make CIRS difficult to diagnose. These include: memory problems, brain fog, trouble with focus and word recollection, decreased learning ability and confusion; disorientation; headaches; fatigue and weakness; muscle cramping, aches and pains, joint pain without inflammatory arthritis, nerve pain or "ice pick" pain; numbness and tingling;

hypersensitivity to bright light, blurred vision, burning or red eyes, tearing; sinus problems, cough, shortness of breath and asthma-like symptoms, chronic congestion; tremors; vertigo; abdominal pain, nausea, diarrhoea; appetite changes; metallic taste in the mouth; weight loss resistance; night sweats and temperature dysregulation; excessive thirst; increased urination; frequent static "shocks"; morning stiffness; and skin sensitivity.

What you can do

First and foremost, if you suspect you have CIRS or are suffering from biotoxic accumulation, you must remove yourself from the environment that presents the exposure. But remember: if you do have CIRS and you have the genetic difference that makes you unable to remove biotoxins from your system, additional steps to heal yourself are crucial. This is where the help of a knowledgeable practitioner who understands how to treat CIRS effectively is required. To prevent accumulation of biotoxins in your environment:

- Use air purifiers and sanitisers
- Be sure to scrub mould off surfaces and dry completely
- Always fix leaks or other water problems as soon as they arise
- If absorbent material, such as tiles or

- carpet, becomes mouldy, throw them away
- Never paint over or caulk mouldy surfaces
- · Clean and repair roof gutters regularly
- Frequently change air conditioner filters and keep drip pans clean and drain lines unobstructed
- Ensure the ground around buildings slopes away from the foundation, so water doesn't collect at the base
- Measure indoor humidity with a meter and keep it between 30 and 50 percent, no more. Use a de-humidifier if necessary and/or increase ventilation
- Make sure kitchens, laundry rooms and bathrooms are well ventilated
- Never carpet an area that is exposed to moisture, such as a bathroom

in multiple scientific peer-reviewed papers, and one of the reasons it's the best option is because it identifies mould that has settled in dust via a specialised technology called quantitative polymerase chain reaction (MSQPCR). It also identifies spores that aren't airborne, as well as identifying the exact species of biotoxin. To get accurate and valid results make sure the lab you use follows the EPA patent and laboratory procedures exactly, otherwise your results may be misleading.

Mould illness or CIRS is an issue that needs to be taken seriously. If you suspect your home has a mould problem, take the necessary steps to eradicate it. And if any of the symptoms listed in "Symptoms of CIRS" linger after you have removed the mould from your environment, seek the help of a qualified health practitioner who can test for the HLA-DR gene and get you started on a detoxification path if CIRS is indeed something you are suffering from.

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