

The Hidden Dangers of Airborne Mycotoxins

Is the air of your indoor environment exposing you to potentially harmful toxins?

What Are Mycotoxins?

For decades we have heard the term “toxic black mould” which has largely been used by the media to describe a particular mould, *Stachybotrys chartarum*. The “toxic” part of this term refers to mycotoxins. These fungal poisons can be produced by many species and subspecies of moulds, not strictly just *S. chartarum*. The first thing you must understand about mould is that, like many organisms, they have natural defense mechanisms in place to protect itself. For numerous moulds and fungi, their defense mechanism comes in the form of mycotoxins. These mycotoxins are toxigenic in nature, can easily infect a host (animal, human, plant, or any other living organism), and protect moulds from competitors fighting for resources. Much of the mycotoxin knowledge that we have today is due to testing within our foods and feeds. These commodities are routinely tested and highly regulated for their mycotoxin content because of the known dangers of ingesting these toxic poisons. In recent years, there has been a suspected link between water-damaged homes, mould, and mycotoxins. Yet, inhaling these toxins has not been taken as seriously as ingesting them through our foods. Our indoor environments have become a potential health risk and it is vital we test the air.

How Do Mycotoxins Become Airborne?

Current scientific research shows mycotoxins are aerosolized via evaporation. As water molecules heat up, they vibrate very quickly. When they begin to speed up, these molecules escape into the air as a gas. When damp/wet mould heats up, the mycotoxins attached to these moulds get lifted into the air amidst the water vapor. As humidity levels drop via dehumidification, air scrubbing, air purification, and/or air movement, the airborne mycotoxin levels also increase. In addition, if mycotoxins are attached to dust and debris, they can be scrubbed off these particulates when passing through filtration devices such as HEPA filters. Due to mycotoxin's incredibly small size, such filtration devices are useless in catching them. In fact, they actually cause them to be released as ‘clean’ air back into the structure.

CALL TO ORDER AN AMEA TEST



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Airborne Mycotoxins Health Affects

Symptoms or no symptoms present, you are still in danger of adverse health effects.

Difference Between Mould and Mycotoxin Exposure Symptoms

It is important at this time to point out some general differences that must be considered when discussing moulds and mycotoxin health risks. From a human health perspective, moulds including mould spores, are generally classified as allergens that are trapped in mucus membranes and most commonly cause irritation to the nose and throat resulting in coughing, sneezing, runny noses, and general allergenic type symptoms. Mycotoxins, on the other hand, can readily make their way to the lungs, respiratory system, and subsequently into the bloodstream. Some mycotoxins are known to be toxigenic, others known to cause neurological symptoms, and even more varieties that can cause many unspecified health consequences.

How Our AMEA Test Can Help

21st Global Labs AMEA (Airborne Mycotoxin Environmental Analysis) is the only way to ensure your indoor environment's air meets safe mycotoxin levels. Our mycotoxin testing approach is far superior. 21st Global DOES NOT test for mycotoxins from sources such as dust on A/C or heater filters. 21st Global Labs tests the air you breathe, in the rooms you breathe in. Air sampling is considered the strongest strategy for the detection of airborne contaminants, especially when conducted for health concerns as it provides a better understanding of inhalation risk and exposure.

Diseases Associated With Mycotoxins

- Alzheimer's disease
- Autism
- Various types of cancers
- Cardiovascular disease
- Chronic fatigue syndrome
- Diabetes
- Fibromyalgia
- Hypertension
- Rheumatoid arthritis
- Inflammatory bowel
- Lupus
- Sjögren's syndrome
- Crohn's disease
- Multiple sclerosis
- Raynaud's disease
- Kidney stones
- Asthma
- Vasculitis

There are many many more...

When to Test Your Indoor Environment?

- 1 Visible Mould
- 2 After Mould Removal
- 3 Water Damage
- 4 Health Concerns
- 5 Individuals with Mould Sensitivity