Introduction to the Functional Edge and John Bode

Again, whether you use a company. The old pros were a company like us. Sometimes the fear of not knowing and the worry of not knowing, Yeah, is is burdensome.

The ostrich approach doesn't really work that well. And so again, you know, find inspector interview, go out and, speak with them and have we do do comprehensive assessments, but, that way you, you know, what, you're breathing in and your family's breathing and you know what the exposures are, and then you can make a plan to fix it if there is an issue.

This is doctor talks. Real talk from real doctors. Only issues that matter to you most. Welcome to the Functional Edge podcast. My guest today is John Bode, an expert in indoor environmental health and the director of operations at Mold Pros, a company specializing in comprehensive mold inspections and testing.

With years of hands on experience in assessing and identifying hidden environmental hazards, John and his team have used advanced technologies to detect mold, mycotoxins, and other air quality issues that can impact our health, often without us even realizing it.

Based here in Texas, Mold Pros has become a trusted name for homeowners, physicians, and patients looking to identify and resolve hidden mold problems.

Today, we're diving into how mold is tested, what technologies are used, how common it really is in homes, especially in human climates like Houston. And what you can do if it's found in your space.

John, welcome to the Functional Edge. I'm so glad to have you here. Thank you. I appreciate the invite, doctor Ward. Really looking forward to our conversation today.

Yeah. So can you start by telling us a little bit about your background and how you got into the field of environmental testing and mold remediation? You bet.

Yeah, we started, shoot over 15 years ago, 2011, actually, my basement in Kansas City, is where we started out. That was our first mold. Pros. Location started out really with the housing bust.

And so the lot of these foreclosed homes wound up having mold issues.

John Bode's Background and Mold Pros Origins

And so my background is actually in mortgage banking. So we started buying out these homes and found out they had mold problems. And that's what introduced me after a couple of years.

Well, we found a company. I'll digress, a little tiny company that used enzymes to treat mold. Did our research found that that was a much better approach?

We partnered with that company. It took us about 12 months to kind of outgrow what they did. We met with a doctor by the name of Joseph Brewer, and we worked on one of his.

The patients homes were the only company after, I think, the third or fourth company, they actually treated that home. So that's what put us down. The health side was our introduction, Doctor Brewer, and then he's published a lot of papers and kind of expanded some of that field.

And now we have eight locations nationwide. That's great. So what makes mold pros different from other

companies doing indoor air quality measurements?

Yeah, that's a good question. There's a couple things that make us unique. One is that, you know, in the last decade and a half, we've become really focused on the environmental illness side.

And so there are a lot of companies will come in and do some pretty basic mold testing, and that may be fine for, a good portion of the population. But what we found is that the don't do adequate testing for those that have environmental illness.

And so we've over the years have developed not only, comprehensive inspections, but we do some pretty comprehensive, sampling as well, whether it's mold, bacteria, mycotoxins, endotoxins, volatile organic compounds or such as formaldehyde or benzene.

So really we try to be everything around environmental side of environmental illness. Wow. That's great. Yeah. So when a homeowner suspects mold, what's the first step in confirming whether it's present?

Yeah. Great question. So we always encourage everybody to make really data driven decisions. And what we would do is have them reach out to sunlight, whether it's mold pros or company very similar that understands environmental illness.

Go out and get somebody who can do really good testing and based everything on data right. Right. And so what are the most accurate or effective types of mold testing that you use?

Yeah, that is a great question. The short answer is there isn't any one that's going to be the most after the most effective. So I'll kind of rephrase the answer maybe a little bit.

The most sensitive test is going to be any kind of polymers chain reaction or PCR test. Also is a DNA test right. So that could be like an Army test.

What Makes Mold Pros Different

The Emma test is a great test. Hurts me to also, PCR is pretty, pretty limited, but that is going to be as sensitive as fast as we can get. But it's also very narrow.

And I'll give you an example of that. So a lot of our clients will run an early test say on first and that'll tell them, hey do I have there's a panel of 36 fungal species.

Do I have these species? Well, that army test has about. Well, they has exactly ten Aspergillus species. Well, there's almost 300. And so you're only getting 3% or so of all the Aspergillus species.

So what we would recommend is we're big fans of surface sampling, and we're big fans of air sampling in combination with PCR sampling. And, for a lot of our clients that are environmental, we have environmental illness.

We're going to recommend environmental mycotoxins sampling as well. Yeah. Can you go into a little bit about air sampling because ages ago, this is long before I got into mold and started learning about mold.

I was curious if my office or our home had any mold contamination in it. So I called a company and I couldn't tell you which one it was, but they come and do the little air sampling where they put the little trap on a tripod in various rooms, and lo and behold, like everything came up negative, like, you know, and then I found out later, like, well, maybe those are rarely coming up positive.

Is that is that what you find or. Yeah. No, not at all. Okay. So there's some things that, that, that can be done to make sure that we get the best results from, from, spore trap tests, from bio aerosol test.

I'll give you some examples. And so this is it's just a different type of test. You as a practitioner would never run one

test on a patient.

Mold Testing Methods and Air Sampling

And and, you know, you wouldn't take my blood pressure and say I. Well, I think your heart risk is probably okay if you go. So, we would never do that as an inspector as well.

But, so air sampling what it does, it gives us a really good indication of ventilation risk. And it also is comparative. And I'll give you an example.

So an air sample should always have an, exterior baseline sample and then an interior sample. Okay. When we sample on the inside, we want to catch the home in its natural resting state.

So we want to make sure that all the IQ machines, that everyone has had been turned off for 24 hours in advance. That way, the results aren't biased. We want to turn the fans on to the Hvac system to capture what could be in the decoy.

And so there's some things that can be done to make sure that we have, the best representation on the interior sample. Okay. Can you walk us through the process of a typical home inspection?

Like what areas do you prioritize first? The first thing we do is we'll sit down with our client and we just want to understand, you know, the history of the home.

Are there areas in the home maybe, that you don't feel as well as others? Are there any odors that you may pick up in certain areas of the home as opposed to others?

And then we get a nickel tour. We'll scan the entire home. We'll get a Nicotero tour. We understand the rooms. We want to have access to attics, crawl spaces.

If they're there, you're in here. You're in Houston, so we don't get a lot of basements. Okay, so we've got some crawl spaces, but we'll do that. And then we start on the outside, and we start with an exterior inspection because we're looking for moisture issues, which would create mold problems.

And so we're going to start there and then work our way to the inside. Okay. What types of technology or tools does mold pros use during inspections? Do you use moisture meters, infrared cameras, particle counters or other advanced tools?

Yeah, we use those advanced tools in addition to what you listed. We have the use of more scopes that can help us see in spaces that we can't really get to very well.

So the IR cameras will help it does of course is all thermal. And so it helps us to detect thermal anomalies. So we'll scan a home all exterior walls looking at the windows looking underneath sinks all those sorts of things.

And then we're looking for these thermal anomalies. And then we use a moisture meter to measure the actual moisture in that building material to see if it's elevated or not, because you can get some false positives with that.

Air cam okay. Yeah. So we'll use that. And then we'll also use some tools that are pretty basic. For example, there's nothing beats, your eyes and your nose first thing when I walk into a home or any of our inspectors watching at home, we're going to smell.

We're trying to smell for that musty microbial VOC, odor. Yeah. Then our eyes, we're going to be. Not that we're trying to be nosy, but a good inspection.

We're pull everything out from underneath your sinks. We're going to look in areas that have that are high risk. And so we're going to do that. Yeah. Also the use of high lumen flashlights the defined growth.

You can see okay many properties where you look at say a nightstand or behind dresser. You can't see anything. But if you use a high lumen flashlight at an angle, then you can see the elevation of say like Aspergillus or Penicillium growth.

And you wouldn't see otherwise. And so we're a lot of inspectors, in my opinion, miss, it is that they don't take the time to do that work with the high limit flashlight.

The eyes, the nose. Yeah. Validate a lot of that with your technology at that point. Okay. So you're able to detect hidden like mold behind walls or under flooring with these technologies.

Well it can yeah.

Home Inspection Process and Detection Tools

So we can turn around and we can see if there's a thermal model in a wall or if there's a moisture, there's increased moisture in a wall then, or just again with the eyes, if we're going to see some water staining that may be dry today, but maybe there's been past issues.

And so there, so that's where that, that visual inspection really comes into play. Or there could be nail heads that pop or seams on drywall that have pop, or there's warping or so at that point, then you're going to do that invasive sampling.

So there is a it's actually an air sample. We make a hole about a little bit bigger than a pencil into the drywall, and we can sample inside the wall.

We're going to sample inside the ceiling without having to unnecessarily remove that building material okay okay. Air force can be a little tricky because there's no way of sometimes just just remove the flooring to get to it.

And yeah, that's just the way that that goes. But okay, there are some tools that a good inspector will use to be able to, test in the inter cavity space without damaging it too much.

Okay. Do you test for mycotoxins specifically or just mold spores? And if so, how is mycotoxins testing done in the home environment? Oh great. Great question. So yes, we do both.

You can have we've seen it over the years. You can have molds without having the mycotoxins. Right. So we talked about Aspergillus. We could have other types of Aspergillus that are not, mycotoxins producing.

Or we could have a situation where we have. So you asked for Jelly's fumigatus or Aspergillus flavus that can produce mycotoxins, but they're just not producing it.

So we're going to always test for molds and Michael, toxins for environmental illness, clients then how we test, you know, there's three pathways for exposure really dermal contact inhalation and ingestion.

So for our Michael toxin testing what we're going to do is we're gonna test the Hvac filter one. There's a couple of reasons for that. It eliminates some of the sampling bias.

If you go around and sample dust collection throughout the house, you may hit a hot spot or you may hit a spot that that doesn't have not as hot, so to speak.

And that can bias your results. With an air sample taken from the Hvac filter. What happens is one that filters should be in there for usually 30 or 90 days or less.

One inch filter. And secondly it really gives us line of sight to what your inhalation risk is. And it eliminates all that sampling bias. So those are really the three reasons why we sample from AC filter.

We do work up in AI. We have branches in Colorado and the Pacific Northwest where they don't have central heating there like we have in the south. And so then you have to do a composite sample like ceiling fan blades and, and up, up high and then.

Okay. Yeah. How common is mold in homes especially here in a hot humid place like Houston? One, I guess very common molds are ubiquitous. They're everywhere in Houston, and I actually live in Florida and so very similar hot, humid climates.

Yeah, it should be expected. There's mold in every structure. Yeah, it comes in from the exterior. You know, when every time we open up the doors and windows etc..

But in the south we're more prone. And so we see a lot of we can classify molds into two categories. We have zero filling molds or dry loving molds which can bloom with just elevated humidity like we have in Houston or Florida or anywhere in the South or in the Midwest in the springtime, etc.

then we have hydrophilic molds like Stack and mattress or Kotomi, that require a water leak. So it's not uncommon to find Aspergillus and Penicillium filling molds in many homes.

Okay. In the south. Okay. Are there any particular red flags or building materials that make a home more likely to have mold? Yeah. So, molds need a complex carbon compound to grow on, and they need moisture.

And the amount of moisture depends if it's zero filling or hydrophilic, mold that it is that needs oxygen. Right. So, anything we make our houses out of, out of drywall.

And so actually, that's a food source. All the case. Good. All the woods, that we use are complex carbon compounds are leather furniture. The furniture inside of a home is going to be a complex problem compound.

So everywhere is going to be a food source.

Mycotoxins, Environmental Illness, and SIRS

There are some things that, we recommend to a lot of our clients, to help minimize some of the risk, for example, cardboard boxes. We, we asked them not to store personal items in cardboard boxes because it's paper.

It's a cellulose candle and it absorbs moisture. So we always say hey if we have elevations of zero filling molds let's, let's switch to those Politoed you get a Costco or.

Yeah. So the plastic bins are better than the cardboard boxes. Because plastics are not a good food source. Okay. What about drywall? Is that a food source. To get meat?

Yeah, it certainly can be. There's no doubt about it. But that's the way homes are built these days, though, so it's really tough, right? It away from it.

So then you just have to really manage the moisture side of it because you can't you can't take all the drywall out of your home typically. So you just have to manage that humidity.

Yeah. What are the most common causes of indoor mold growth that you see in the field? Yes. Again, it's something humidity driven. There is kind of a misconception.

Everybody thinks, mold is going to be in these old, damp, older homes. And. Right. Most of our business is in newer construction. In fact, we've done many, many remediations on homes that never been lived in.

Oh, wow. So that's kind of scary. Thought. Yeah. It's just the way that how we construct homes these days. So yeah, there's there's a lot of a lot of things that, that, that we see that we can help abate and we can go down that path with a client or a patient, how they can avoid some of those issues.

Yeah. Yeah. Many patients are extremely sensitive to mold and have chronic inflammatory responses. Are you familiar with the needs of patients with this chronic inflammatory response syndrome, or.

Chris. Yeah, we certainly are. Serious, I should say. Yeah, we do. We have a special protocol. Whenever we have, patients that either have sirs or also, if more of a functional medicine doctor may just call it environmental illness.

Yeah, that's, you know, either way. But yeah, we and I think you have to be. Yes. If you're looking for an inspector or a mediator, that's one of the qualifying questions that I would ask.

In the spectrum of mediators, what's her familiarity, with that type of, condition? Yeah. So you can kind of, like, make your, your diagnosis, your protocol just a little more aware of if somebody is dealing with that situation.

Yeah, well, none of these things are inexpensive. And so we always do a client intake call. A couple things that we would ask somebody is, you know, are you one, do you have a clinical, or urine mycotoxins test that's positive?

If that's the case, that helps us understand that. We probably did want to know where that exposure came from. So environmental mycotoxins testing pretty important.

And then also chemically sensitive. Do you see a lot of chemically sensitive patients in your practice? I do, yes. And so then it can be a situation where we need to go back through and help them understand what the chemical exposure is going to be, whether it's petrochemical goals or if not, you know, from aldehydes or benzene.

Because it's not always mold that. Yeah, it's essential. It could be other things. Yeah. Okay. Well, once you identify a mold problem, what steps come next?

Do you work with specific or mediators or does your company handle that as well. Yeah. We have we have three things that we do within our company. Three kind of pillars of our business.

One is the, consultation side where we help folks, understand, environmental issues, in their particular home. And then we have an inspection side of the business, and we have a remediation side of the business.

So, one of the things that make us unique on the remediation side, is I actually have a patent for, not only removed fungal issues from a home, but also mycotoxins from the home and treating the personal cost as well.

So we actually have those three, things that we can provide or services we provide for our clients. That's great. That's great. And then how do you verify that a remediation has been successful?

Is post remediation testing part of your protocol? Absolutely. Again, we we try to encourage everybody to make really data driven decisions. And so whether that's on the front side of it, understanding what kind of contamination they have or the backside post post-treatment, you need to understand what we're pretty good at what we do.

Remediation, Post-Testing, and Prevention

We do not get it every time. The first time. Sometimes they're stubborn colonies that you have to get. So you would not know that unless you had post testing.

Yeah. We encourage, folks to post testing. Done. What we recommend is having a third party, whether we'll coordinate that or one of our clients will coordinate that to have someone kind of come in and check our homework for us. So. Okay. Yeah.

But, yeah, we'd highly recommend post testing. Awesome. Okay. Well, what steps can homeowners take to prevent mold growth, especially in humid climates like ours?

Yeah. So is that again, great, great question. Which start with Hvac systems. They could either be our best friends in helping filter some of that stuff out and maintaining humidity levels.

Or if we have contaminations, they can be our enemies, our worst enemies. Spreading that out, throughout the house. You know, we always say the, each vac system is they're the lungs.

It's the lungs of the house. Yeah. So it all starts there. We recommend our clients, get, smart thermostats again. I live in South Florida, and it's very humid, a smart thermostat.

We'll have a humidity setting on there, typically, where you can adjust where your system will either overheat or over cool based upon the many levels in your home.

And so you can use that, to help drop humidity levels, the EPA recommends maintaining humidity levels between 30 and 50%, ideally to prohibit mold growth.

And so a smart thermostat is a relatively inexpensive way to make sure you don't ever see us on the remediation side. Okay. And, this month, thanks to, we know that we're going to get these airborne contaminants every time we open the door.

We just don't want them to thrive. And so, if you the EPA also recommends using a Merv 13 or 16 air filter to help capture some of those finer particulates when they do get into your home.

Okay, so if we use that as a line of defense, we maintain humidity fairly well, then we like our odds of, again, not not seeing us, show up. Yeah. That that's great.

That just leads me into my next question about, are there specific air purification systems, dehumidifiers or building materials that you recommend to patients or clients trying to create a low mold home?

Yeah. I'm not really brand specific, per se. Okay. So I'm after the filtration level. I have an indoor air quality machine. That's, separated, you know, so that's have a Merv 17 rated.

So we'll water and recommend, that in addition to getting a good Merv 13 or good Merv six air filter for as dehumidifiers, if your system is just not pulling out the moisture like it needs to be, it could be, short cycling perhaps, or just not functioning properly.

Then you may want to look at an alternate, either a whole house dehumidifier or even portable dehumidifier. Okay, I do that during rainy season, for I have a portable dehumidifier just to kind of give a little extra oomph to my Hvac system.

So there's some there's some, there's some things that can be done. Okay, so what should someone look for when hiring a mold inspector? Are there credentials or certifications that truly matter? Yes.

There are, I'd actually say yes and no. I'll give an example. Texas and Florida are license for states, as is New York. So. And I'm a licensed mold inspector.

That doesn't mean that just because they're licensed the understand environmental illness or sirs, as you mentioned earlier and so, that's a starting point in those states to make sure that their license and there are certifications as well, for assessors.

But again, that doesn't guarantee that they have understanding or knowledge around mold toxins or environmental exposures other than that, just basic mold testing.

And so, yeah, I've talked to a lot of inspectors at him and a lot of Michael toxin is and that's just kind of scary to me. Yeah. So what I usually recommend, doctor Ward, is that they talk to their practitioner and see if they have someone that they know that is, knowledgeable around the environmental illness space and has a comprehensive inspection program.

Yeah, yeah. That's, that's that's what we typically recommend. Great. And what advice would you give to someone

who has symptoms they suspect or mold related, but they haven't had their home tested yet?

Yeah. Again, whether you use a company, the mold pros or company like us, sometimes the fear of not knowing and the worry of not knowing, yeah. Is is is is burdensome.

The ostrich approach doesn't really work that well. And so again, you know, find inspector interview, go out and, speak with them and have we do do comprehensive assessments.

You know what? You're breathing, you and your family's breathing and you know what the exposures are. And then you can make a plan to fix it if there is an issue.

Yeah, yeah. And and just what do you think about the home kits that you can get off of like Amazon, you know, with like mold plates. Do you think it's like better than nothing is it's just something to get started with.

And then if you see mold okay. Now you really need a mold inspection to. Yeah. So probably we don't use a lot of agar plates. I'll explain why. So it could be a starting point, but an auger plate is typically it's potato dextrose that's in there.

You set it out and you're going to set it off for so many days, and then it's going to get nice and fuzzy and look disgusting. And then yeah, let's get into the lab.

The challenge with that it's not quantitative. So whenever an air sample gets taken it's so many liters of air get pumped through it for so many minutes.

And you know exactly this amount of input produce this amount of output, this growth with auger plates. You don't have that. So how much air went across them.

Hiring an Inspector and DIY Mold Test Options

And plus they're biased towards zero filling moles. Moles that are airborne. But like the mattress start from what people call black mold doesn't aerosolized very well.

And so you may have a wall of stack and have an auger play, but it's not going to culture that well. And so it's bias in that way. So you know, the I would say the Army tests and if there's one to an m, those are great starting points per se.

Okay. But every test has its strengths and weaknesses. But if you want to do something that's a DUI test. I would maybe start there as opposed to an auger plate.

Okay. For those reasons. Okay. And the Army and the Hertz me test, you're saying that you can do that as a DIY test. You can. I believe the the hurts. Me too.

So that hurts me to test is only five fungal species. It's cheaper, but there's only two species of Aspergillus. And as we've talked about earlier, there's over 300.

So yeah. Yeah, I'm not sure that from a Copperheads comprehensive data standpoint, that really gives you the insight that. That's right. Right. So the Army test is going to provide 36 species okay.

But again it's still very narrow. Yeah. Because there are hundreds and thousands of species that's out there. So but okay if you're looking for a starting point on a do I personally would do an M. A.

or, or me first and go from there and I would do a test which tests for pathogenic fungal species and an actual mycotoxins. I would do that test before I did at Army.

Okay. Does it help and where would people find the Emma test to do. Yeah. You can online or you can call our

office and there's a DIY kit. We can we can get. Okay. Sure. That was.

And that leads me to my last and final question, like, where can listeners learn more about mold pros and how to get in touch with your team? Yeah. Very good. So we have eight locations nationwide.

Probably the easiest way would be to go to the website. That'd be David W dot the mold pros.com okay. We have a lot of educational resources there. Case studies.

We even have an E! Magazine that talks about has some, kind of mold 101 talks about pitch vac systems and their importance and crawl spaces. Some prevention, tips are there so that you don't see us on your door.

We also have a, contact form on our website. Some, some, some basic chat functionality that can answer some questions. But you can always call our offices, our toll free number is, (855) 595-6653.

And then or they can email for a free consult. We'll, we'll provide every client a free 30 minute consult.

Where to Learn More About Mold Pros

So all your patients the reference you will we'll provide them a free 30 minute console. Happy to look at their die testing that they've done at no charge.

But our, our email is info info at demo pros.com. And, just let em know that, doctor Ward seven. Okay, good. All right. Awesome, awesome. Well, thank you so much for joining me on the functional edge.

I hope today's episode gave you fresh insights and practical tools to level up your life. If you found value and what you heard, don't forget to hit subscribe and share the podcast with someone who needs it and leave a review.

That's the best way to support our mission in bringing, powerful health solutions to more people. So for more resources, updates, and behind the scenes content, visit Doctor Julia ward.com.

Thank you very much. Thank you. My pleasure. I. Thank you for tuning in to Doctor Talks. We hope today's episode has enlightened and inspired you on your path to optimal health.

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