Plenum and HVAC Airflow Basics

So a plenum is basically this big box that a bunch of pipes from your HVAC unit go into. So there's an intake one and then one that goes out, one comes in.

And this box will give us a lot of insight. It's kind of like you open up the lungs. If this person's a smoker, you'll probably be seeing a ton of tar within this lung.

The plentum will usually be the central indicator of, There's a lot of dust in the plenum, meaning, you know, maybe the filters haven't been changed, there needs to be some regular maintenance done.

But a lots of the times what we see is that plentum is filled with mold. And imagine mold kicked on to the inside of this lung and it's breathing it out and distributing it back into every single bedroom, every living space of a home.

Welcome to the Functional Edge.

Podcast Introduction and Guest Welcome

I'm Dr. Julia Ward, and this is where science meets real-world strategies for living healthier, sharper and stronger. From uncovering hidden environmental toxins to unlocking peak performance and mental clarity, we cover it all.

Ready to take control of your health and thrive? Let's dive in. Hello and welcome to the Functional Edge podcast. I'm your host, Dr. Julia Ward, medical director and founder of Balanced Body Function Medicine.

Today we're honored to welcome Mimi Faye to our show. In this episode, Mimi will be showing insights on healthy home environments, indoor air quality, and how environmental factors like mold and airborne contaminants impact overall health.

Mimi is the owner of Green Home Solutions in the greater Houston area, where she focuses on helping families identify and address air quality concerns using science-based testing, remediation, and prevention strategies.

So stay tuned for an engaging conversation that promises to empower and inspire your path to wellness. Welcome Mimi, thank you for being here. Thank you, Dr.

Julia. It's an honor to be here, I listened to your podcast and you have some very, very interesting episodes that I've personally learned a lot. So thank for doing this.

Oh, Thank You very much. Well, first of all, how do you define indoor air quality in the context of a typical home, and why is it so crucial for health?

Well a lot of people might not know this, but our indoor quality can be two to up to a hundred times more polluted than outdoor air. And, you know, we always emphasize on the food that we're eating and the toxins that you put on our body, and you have this great series of toxins within the home.

But the thing we can't see, feel, or touch is the air that breathe. So air quality is just as crucial as everything else that is put in our bodies. How do we define indoor air?

That's a really loaded question. So I'm just going to brush the surface without getting into too much technicality. We think of indoor as a few things.

Humidity, relative humidity is a huge one, and I think we can go into that a little bit later on.

What Indoor Air Quality Means

There's also particles, so there's different sizes of particles. And those particles we could breathe in. And as you know, they'll wreak havoc on all these different systems.

As well as there's gases. So gases are not particles, but for example, everybody knows what carbon monoxide is. Very deadly gas. We can't smell it or see it.

and things like carbon dioxide. There's also VOCs, formaldehyde. So we typically look at indoor air quality in these three large sections. We have the humidity, the particles, and then the gases.

Got it. And how common are poor air-quality issues in homes that you inspect? And what are some of the most frequent hidden contributors you find? Well, especially being in Houston, we don't have a lot of time in the year where we open the windows.

Right. We have long, humid summers, and everybody says, okay, well, I need to keep my humidity down. So we close the window. Sometimes, you might live by a busy road and dust comes in.

People actually think, OK, if I keep the my windows closed, then I will keep bad stuff out. Not to mention in other parts of Texas, there's all sorts of mountain cedar, for example, allergens that make people act up at this time of year.

So there are a lot of factors that we're looking at, but the biggest one I think is the lack of ventilation. If you think back to our grandparents, they say, burp the house, And you talked about this, you emphasized this in one of your previous podcasts as well, is keeping all the windows open to let cross ventilation come through.

The other thing is building science has come a long way. So our building techniques and building envelope and energy efficiency on the construction side of things has improved over the years.

In the 1990s, we started using a different wall assembly for waterproofing. I'll give you an example is building paper. So if you go around to construction sites, you might see this.

It looks like a white paper might have Tyvek or something on it. And it's this paper outside of the plywood. Right. So that's called building paper. Think of that as kind of a saran wrap, if you may.

Okay. That's supposed to keep the water out of the house, and we're like, okay, well, that good, right? But think of when you put sarin wrap on your skin, what's going to happen under that sarain wrap?

It's gonna get really moist. Yes. There's a lot of humidity. there's different building materials that are constantly coming out to be more energy efficient, to more airtight.

However, with that also comes risks of the environmental side, where because of air tightness, it's causing moisture, condensation, and lack of ventilation if it is not installed properly, or sometimes if the building paper is installed, but the ventilation is no sized correctly, the trades are not talking to each other.

Common Home Air Quality Problems

then that becomes a problem for the whole house as a system that needs to breathe. So does this wrap sort of increase the humidity inside the walls of the house?

It shouldn't. If we have a wall assembly, the wrap is to keep the water out. Now the wall, assembly itself needs breathe, so a building is just like our bodies is a living breathing thing.

And we would say the HVAC system is the lungs of And the wrap is just, let's call it the skin. So the skincare acts as it wicks away water, but it also absorbs things.

And when it's a healthy barrier, it will allow things to enter and exit as a system. Um, so it not really one thing that contributes to or contributes the lack of good air quality inside.

But sometimes the system, might not be talking to each other or, you know, as like the body, we might have introduced something that wrecks the system.

So the oiled machine isn't running optimized anymore. Got it. Okay. When you do a home inspection, what are the first things you look for that most homeowners overlook?

There's several, and I'll go into a little bit of the process that we go through when we into home inspection. And I wanted to talk about one thing that every homeowner can go to their own house and check out today to give them a bit an indication of their indoor air quality.

So when we go in and we do an assessment, an indoor air quality assessment for a home, we actually start on the outside of the home. The outside the of home is very important because that's where the elements are.

Most of time we get rain. In Houston we have hurricanes. So we look at the roof, the inside if there's siding, daco, brick veneer, are there any potential points of moisture intrusion?

It could be something like a woodpecker or a bird. There's holes in the soffits where pests and rodents can get in. Sometimes there's cracks because of building settlement.

So when building settle, and we'll talk about foundation, but when buildings settle which is normal, because building products expand and contract at different rates due to different materials.

But settlement sometimes will cause hairline cracks. It's always good to go out and check that out. In addition, we're looking at, okay, If water comes down from the top down, how is it being routed?

Another big issue for settlement is actually when water pools, it can shift the soil underneath our foundation. So a lot of the times when you see foundation having issues of settlement, It could be a tree root, but a lots of times it's the water.

Let's say we have sand or clay and you submerge it in a ton of water, Yeah. It shifts. And with weight on top, it could do this. So we look at gutters and downspouts.

Okay. Going back, if your listeners are looking at their own house, go and check out your gutter. Make sure there's no holes, make sure the guttars have end pieces properly attached so the rain is not flowing and then just going down against the wall of your house.

And if it goes down the wall, any little pin point or hairline crack is going to suck all that moisture into the walls assembly. Also, one thing that we see a lot in Houston is where gutters come down, they don't direct the water away from the building.

It actually just pools right beside the foundation. we should be diverting water at least five feet away from our house. And that's where you see some places with the big pipes.

It might not look as attractive, but just know that that is actually a very important part of the health of your foundation and the oil that's supporting the foundation around the house.

Home Inspection: Exterior and Foundation Checks

Got it. And now going into the Foundation, if there's a lot of crackings, we also look at the Foundations, because sometimes if you see cracks in the driveway, it could indicate that that crack might be going under the House.

When the Fundation is poured, If done correctly, there should be a vapor barrier on top. So meaning the Fondation

on the top of it there is a piece of plastic.

So any groundwater that the concrete soaks up, there's a plastic that goes on top of it so the moisture doesn't come from underneath your floors. Sometimes, depending on when the house was built, who built it, I mean, we wouldn't know.

Or if there is too much movement in the foundation, has that vapor barrier been compromised? Not only can the vapor barrier be compromised, sometimes they're non-existent in older homes.

In addition to that, if there's too much settling of the soil, we might get pipes that have cracked underneath the foundation. So there is water constantly bubbling.

And so when we encounter that that's a bigger issue that we need to address. Telltale signs of moisture on your slab would be buckling of the hardwood floors.

So go back and check your hard wood floors or your laminate. If you see bucking, especially on the first floor, get a moisture meter or call us in to do an assessment.

Maybe pull the edge of carpet out to see if there's any discoloration underneath. And that'll give you a pretty good indication if you have a wet slab.

Okay. That sounds like a major issue. Yes, it can be, that's for sure. But there are fixes for that. It's just how in-depth you want to go. So, humidity is a major factor, especially here in Houston, but for indoor air.

What are ideal levels and what simple tools or checks can homeowners use to monitor this? Yes, absolutely. So humidity is a big one. I mean in Houston, in the evening sometimes, it's like 90% humidity outside.

The most optimal for indoor air is between 30 to 50% of humidity. If it's too dry, if it is under 30% humidity, there are certain bacterias that will grow in really dry environments.

So, for example, If you go to Arizona, it very, very dry and people are more prone to certain types of lung infections. In Houston, we're on the other end.

Anything above 50% of humidity inside your house regularly should be addressed. because that will cause microbial growth, definitely. Can you walk us through your inspection process from the moment you enter a home to identifying issues related to mold, moisture, or ventilation?

Yes. So we were talking about being outside. Once we look at the outside, we now come to the inside of the house. As I mentioned earlier, were looking for three things.

We talked about the relative humidity, so we want to make sure that it's within an optimal range. And then we look at the particles and the gases. So we have certain instruments that can measure.

We have a thing called a true laser particle counter. It actually counts in real time. The particles that come through with a laser. And those things are, you know, could be anything, dead skin cells, PET standard.

it could include mold and spores and things like that. But it's basically any sort of particles. We're especially concerned with particles called PM2.5, and those are a very, very small particle that we can actually breathe into our lungs that doesn't get filtered out.

And then we also look at gases, carbon monoxide, VOCs, CO2, things like that. Then once the gases and the air in general is assessed in every room of the house typically, we'll look at the high-risk areas.

And what are high risk areas? In Houston, especially, mold is a high risky issue. That is usually the main concern for most homeowners because mold can make people very, very sick.

And mold always needs a food source and moisture to thrive. So we look in the kitchen, bathrooms, laundry. You know, the typical places where you'll find plumbing.

At this point, we'll ask the homeowner, has there been a previous water event like water leak that you know of? Do you smell any strange smells? do you have any concerns?

So once we look at that, another very, very important part is we looked at the lungs of the house, which is the HRAC system. The H-RACs system is everywhere in the House.

So if you actually, Dr. Ward, go back to your house and check your own grills. We all have air register intakes. It will tell us a lot about the indoor air quality of a home.

For example, for the listeners here, Go and take a look your registers. Typically, they're white in color. If you see little spots of rust on it, that means you probably at some point had a humidity issue in your home, because it shouldn't be rusting.

Sometimes you'll see growth on, it because its registers are sucking in the air. So when the house is breathing, that register should be the place where a lot of the particles land.

So if there's growth on that, the HVAC system is distributing something within your air. And of course, there's always dust. So another tip is make sure you're vacuuming that all your registers regularly at least twice a year to make that it's clean.

It's dust-free, so we're not recirculating these things around. Going in the HVAC system, we also look at the AC closet. The AC Closet is a tricky one because the A. C.

distributes cold air, right? And the HVAC system is an exchange of hot and cold. So when we have hot-and-cold exchange, plus there's moisture in the air, what happens is condensation.

What we see a lot is sometimes the AC closet is in living space of the house.

Humidity, Moisture, and HVAC Assessment

Sometimes we'll see them in attic, in all various places. But if the ducting is not insulated properly, hot air and cool air meet. It'll cause condensation, meaning moisture, Meaning mold.

There's not a perfect house. So mold is everywhere. It's outside where we breathe. it's just the natural ecology. But what we don't want to see is we Don't wanna see that chronic issue.

And we dont wanna See mold colonize within our living spaces. so if there's moisture the Natural ecology of the mold will gravitate towards that. And then they'll grow.

So those are some of the things that we're looking for. And we go into the attic. We look at the plenum. A plennum is basically this big box that a bunch of pipes from your HVAC unit go in to.

There's an intake one and then one that goes out, one comes in. This big boxes will give us a lot of insight. It's kind of like you open up the lungs.

If this person's a smoker, you'll probably be seeing a lot of tar within this lung. So the plenum will be usually is the central indicator of, okay, there's lots of dust in the Plenium, meaning, maybe the filters haven't been changed.

There needs to be some regular maintenance done. But a of the times what we see is that plentum is filled with mold. Yeah. And imagine mold kicked onto the inside of this lung and it's breathing it out and distributing it back into every single bedroom, every living space of the home.

So are there any low-cost tools or sensors that homeowners can use to monitor indoor air quality in between professional inspections? There's a lot of gadgets and gimmicks out there on the market.

And I want to say, yes, there are, but there's an order of operation to things. Just like when we're going to the doctor and the doctors says, okay, you know, You have a headache, But I'm going throw every single test at you.

to figure out why you have this headache or I'm going to give you all the different drugs. It might be overkill. So the biggest thing that I want to say for indoor air quality is control your moisture.

Having a moisture humidity reader, sometimes that's like with the new Nest and a lot of smart thermostats, they all have a moister humidity on that already.

So that is something worth the investment in my opinion. If you see the moisture content going up, like a dehumidifier is always good. I had a moisture meter.

So it was this little device where I can touch different surfaces and I could measure what the percentage of moisture was. Like I put it up against a tile and see if there might be a leak behind the tile.

Those are good, they're relatively inexpensive, but I also want people to not go crazy with that because it's not always accurate and you might be daring yourself for no reason.

I would say keep the relative humidity low, listen to your body. This is actually our body knows, so this is a very good calibrating tool as well. But yeah, the other thing actually I forgot to say was look at your air registers.

If there's dust, like we mentioned, if there is dust on it, change your filters. if There's growth on, it you probably need to get an assessment on the HVAC maintenance.

And if there's rust on it, it means that there might be a humidity issue. So there are a lot of little clues that you can see before you actually invest hundreds of thousands of dollars into these tools.

Because again, they're just tools, you need to interpret what those data points mean. Yeah. Beyond visible spots on walls, where is mold usually hiding in homes?

Oh, that's a good one. Well, the biggest one that we see are HVAC units due to perhaps higher than desired relative humidity within the home. If there's an active water leak, you should be able to see it.

For example, if there's a bathroom upstairs and there is a leak somewhere, so under the sink, you'll be able to see it. Behind the walls, it might trickle along the studs and you can't see upstairs, but it may show up on the ceiling downstairs somewhere.

Now, the most elusive issues that we see are not the active water leaks, but a building envelope deficiency. So those are the things such as windows are a big one.

If the window flashing detail is not done right and a flashing, what a flash is usually a metal piece that goes on top of the windows or at the bottom that diverts water away from the from window.

Again, in Houston, we've seen a lot of houses with no flashing on their window. So what we rely on is the silicone caulking around the windows to make sure the water doesn't get in.

And over time, it cracks, and it settles. We'll see the bottom corners of the window sills starting to rot. or we'll put a moisture meter on the inside of the wall and on bottom corner of windows it's wet.

So those things you could go years without seeing any stains because it is so small and the occupants might not feel sick if they are not sensitive. So building envelope issues will creep in and you could have entire walls colonized and all the insulation inside has been compromised before we see any sort of staining.

Another one is the big headache, which is The Foundation. And, you know, but again, it could be as simple as we take out the flooring if it's already damaged.

We repair the foundation, we just seal it. So they put this thing on kind of like, so we seal the slab and then we put the floors back on. very, very different ways of remediation.

And there's so many nuances with each one. But the biggest issue is that we always have to make sure that, we get to the source and we have, to, make, sure, that.

We remove the, source, We can't just spray it. we can feel it because it'll come back. Right. You just don't need to serve to kind of make the mold more angry and then it puts out more mycotoxins if you try to.

Where Mold Hides and How It Spreads

Absolutely. And you hear people say it all the time, right? I got my house remediated, but now I feel more sick. And it's because you sprayed the mold and it got more angry.

Yeah, yeah. Tried to defend itself. What are some of the most commonly misdiagnosed or misunderstood air quality issues? Oh, that's a good one. Some of common misunderstood issues are people would say, I don't have an indoor air-quality issue because I do not see it.

Yes. I did not smell it, so I am okay. And it could be the case. It could the be case where, you know, some people are just not sensitive. But, however, we want to be really careful that we're not, I guess, ignoring the concerns of sensitive individuals where they're saying, "I don't feel well inside my home." And they are being dismissed, oh, it's, I dunno, perimenopause or it is stress or its all in your head.

So I think that one is the biggest one. The other one, like I mentioned before, is I remediated, we got it, but I'm still feeling ill. So there's so many different types of remediation and it's hugely, there is a lot of misinformation out there.

People say I'm gonna fog it. Yeah. I am just gonna spray it, definitely don't spray with bleach. That's one thing that is, I hope it's well known, but a lot of people sprayed it with…

I sprayed mold with bleached when I didn't know any better. Because you think, okay, bleach kills everything, right? Right. Yeah, we had that experience too, where we'd put a shelf up in the laundry room, didn't realize that one of the screws to hold the shelf went straight through a pipe in a back wall.

And it was leaking water, but it so slow that we didn' t notice it for years. So one the kids said, hey, the, shelf is warped. We pulled it off and there was this black mold on the back of it.

Oh, I got this. Spray it with bleach. Well, you think, well, it's black mold. After I spray it, It'll no longer be black. Right. I thought I would just for sure kill it.

But we probably just pissed it off further. Yeah. But I've done that. Our first home when we renovated, our whole subfloor was black. The whole plywood was completely black and I went to Home Depot, I bought a jug of this white thing that looked like Modge Podge, like glue, and it just rolled over the floor and then we installed new carpet over it.

And that's probably why my kids were sick. But at the time you, it's good intentions and you wanted to do what you thought was right. And this is why education and your podcast has been really helpful for so many people.

Thank you. Okay, well, what are some simple maintenance tasks that homeowners can do quarterly to significantly improve their indoor air? Oh, I love this one.

I loved this. Number one is to change out your filters in your HVAC every quarter, especially if you have pets at

home. Change those out. Try to get at least a Merv eighth.

So M-E-R-V, eight, the number eight. So those filters are a little bit better at filtering out dust and larger particles. Open your windows. If the weather allows, open it for even 10, 15 minutes a day.

It'll greatly help you dilute whatever gases, particles, spores you may have in your home. Turn on bathroom fans, always. They say 20 minutes after you take a shower, I have mine on first thing I wake up in the morning for about four to six hours.

Okay. When we sleep, we breathe out a ton of moisture. So we could lose up to a liter of water overnight because we're breathing. All of that moisture is in there overnight.

Open the windows, turn on the fans, not just after a show, but it should be at least a couple of hours a day. So clean your grills, your air registers, clean you filters, change them up every quarter, keep your bathroom fans on every day, best practice.

The solution to pollution is dilution. So if we had somebody that asked us to go in for air quality check because the office was feeling unwell. So everybody at the Office was Feeling sick and we went in and there was no mold.

There was No water leak. It was a carbon dioxide issue because they had all these computers in this smaller space with very low ventilation. So it was the carbon dioxide that was making everybody sick.

Even if you have a lot of things in your air that might not be great, if can dilute it and keep it down, you'll feel a you know, when the season changes.

So if there's a freeze, there might be cracks in the gutter because there was standing water that may have expanded. Make sure that the cutters and the pipes are connected because sometimes in a frieze, those detach as well.

You know best practice is just to make sure the outside of your house is always diverting water away from the foundation. and then just monitor the relative humidity.

I mean, I think these things are things that everybody should be doing, and it's very little to no cost. What role do plant-based or eco-friendly products play in improving indoor air quality compared to traditional chemical approaches?

That's a good question. So when people say plant-based at Green Home Solutions, our signature flagship product is as plant based, non-toxic, EPA registered.

What does that mean? The plant base is usually an enzyme blend. So, as you know, enzymes can go and eat up and kill things. The product that we have is an enzymes blend of several different types of enzymes that attack the spores, attacks their membrane, their cell wall, and it turns them into harmless amino acids and water.

harsh chemicals, they do kill biological spores. But the issue is sometimes they introduce more chemicals to already sensitive individuals. So what we see in the feedback we get is, sometimes when a company goes in and they spray something, or they remediate, the occupants go back and feel worse.

Tools, Maintenance, and Low-Cost Monitoring

One is perhaps the mycotoxins, but number two is maybe their chemical load is already really, really high and the remediation has just added more chemical load into their system.

So what you want to see is that on the EPA registration that there's chemicals where you need to let it sit and let the house air out for several days or several hours after remedation.

Those things will give you an indication that it's most likely chemicals, whereas our products, and I'm sure that the occupants can come back into the home right after they administer.

So then you know that it's like low chemical load, especially for people who are sensitive. Okay. I have to ask this one because I'm really curious. What is probiotic air purification and why is it gaining traction as part of whole home health solutions?

So it's kind of like our gut. We have good bacteria and bad bacteria. And it is an ecology within our guts, right? So the good and the bad, they keep each other in check.

It's normal. Like, it impossible to have an environment where there's only good, and not bad. So our air is the same. You know, we mentioned earlier that a normal fungal ecology is what we call it.

There's fungals everywhere. A huge kingdom. There's good bacteria and there's bad bacteria. So what we do, and, there are other companies that do this as well, is once we remediate, we HEPA vacuum, get rid of the mold source, kill, remove, clean, scrub.

everything, we actually scrub the air. So we have this machine called an air scrubber, and what it does is it helps exchange the area. When people say, oh, I have an Air Scrubber.

It's actually not that fancy. it's just this big industrial machine that changes out the Air quickly. Okay. when we open the windows, it might not change as quick, but we scrub all the areas, get rid of everything.

And then we reintroduced the probiotics, which is a good bacteria back into the ecosystem of the air. And what these probiotic do is that over time, they will be able to eat up any remaining spores that we didn't get, because we're never 100%, and they can be active for up to 90 days post-remediation.

So we are introducing that back into the air. I always say, for example, we have a mosquito problem in our backyard. Rather than spraying, We introduce lizards or we introduce dragonflies.

So they will keep the mosquito population in check until maybe there's no more mosquitoes and then they go off to find a new food source. That's great.

I love that. How does poor air quality and common household exposures relate to respiratory symptoms, fatigue, and other chronic health issues? Well, I mean, that would be a question for you.

You would more of the expert in that. But I'm going to talk about that from an air quality professional standpoint versus a medical standpoint because I am not a doctor.

With mold, let's say we think of mold. Mold is just a fungi. There's lots of different types and lots different species. But think of mold as the plant.

And then we think, okay, that's the stuff that we see on the walls growing when we shine a flashlight, the powder. That's a plant! And then you have mold spores.

So mold Spores, think of those as the seeds of the mold. The mold is trying to reproduce, right? So the Mold Spore, they'll release these spore and then the spora will float around in the air.

They'll attach to things, porous materials, dust, you name it. And when the mould spors and the molds feel like they're being attacked, They will release, the word earlier, mycotoxins.

So mycotoxins, think of it as the farts of the plant. The plant is living, the mold spores are organic, but the mycotoxin is a secondary metabolite that is not alive, it's a toxin.

Now, the spores, we can breathe in and what the Spores typically will do, please correct me if I'm wrong, Dr. Ward,

is that it'll cause respiratory issues, sinuses, like a lot of that, because the mold spore are bigger.

The mycotoxins, which are the secondary metabolites, are so small, it can cross the blood brain barrier. So depending on the type of mycotoxin, It will be neurological.

It could disrupt hormones. it could cause cancer. Mycotoxins have been used in bio warfare. Tricothecines have, you know, like hugely, hugely carcinogenic.

so there's a whole realm of studies on that part but so people say well I'm not sneezing so I don't have mold in my house well they might not have the spores floating around because they've remediated but maybe the mycotoxins are still there they're getting neurological issues yeah um somebody I met said that she kept walking into walls so every doorway she would like hit her shoulder because her spatial I guess, balance was off and she was rocking.

Remediation Mistakes and Misconceptions

She felt like she wasn't rocking, lots of in children, you know, ADHD type symptoms, autism type manifestations could be also an indication that there might be something like the neurological side of things.

So I would say, there's the mold symptoms. The mold spores symptoms and then there is the mycotoxin symptoms Yeah, definitely worth looking into if you're having those any sort of neurological issues or brain fog.

So what questions should homeowners ask when choosing an air quality inspection or remediation company? That's a good question. Under the Texas Department of Licensing and Regulation, we are regulated heavily in the state of Texas, also in Florida.

So when you talk to an inspection company, ask them if they're licensed. And it's called an MAC, a MAC. It stands for Mold Assessment Consultant. Ask them, if you're a licensed MAC That means that they've gone through all the qualifications, they have the work experience, the liability insurance and all of those things.

For the remediation companies as well, it's one thing Certified versus licensed are very different. So the other thing is in the state of Texas, a licensed consultant cannot be the same as a remediator.

There's a conflict of interest when the person can come in and say, okay, you have all these issues in your home and I'm going to give you a great big quote.

to do the remediation. So there's a conflict of interest there. There's checks and balances in place. The good thing about having a licensed MAC, which is a consultant, think of the consultant as the doctor of your sick home and your poor indoor air quality is just a symptom of you're sick.

So this licensed MAC is the doctor who will be able to, number one, figure out why your home is sick, and number two, able write a prescription on how to fix this home.

And once the prescription is written, we call it a protocol. You can get a remediation company to come and remediate. This doctor will come back and check and do a test to make sure that the remedation companies has done their job.

And if they don't pass, the homeowner will say, hey, you have to, remediations company didn't passed, You have do this and this. So make the consultant inspector has a license and the remediation companies knows that, okay, I need to pass that clearance test.

before I get paid in full. So there's at least some accountability. What renovation or home upgrade decisions most dramatically improve indoor air quality?

I would say a good HVAC contractor. Make sure your H VAC contract isn't just a guy who knows how to install ducts, especially if you're doing an addition to a house or you are re-ducting.

Just get somebody to check that your machine is sized properly. large enough to handle the home or sometimes they make the machine too large that creates pressure issues within the house too.

When we look at ducting we also look to make sure there's no kinks like 90 degree kink within that ducts because again that just it doesn't balance right if our lungs are not balanced or not working properly it's going to cause all sorts of havoc within our body.

So I would say HVAC is a big thing When you're doing flooring on the first floor I personally like tile because the grout allows your floor slab to breathe.

Whereas if you do the click together vinyl or laminate, most of the time we put an underlay underneath that and the contractors will tell you, okay, that's a moisture barrier that is going to prevent mold from coming up.

But guess what? That barrier isn't sealed all around the baseboards of your house. So if your slab is wet and you're putting a saran wrap over top of that, the mold is going to grow and we see a lot of black mold and things like that under the floors.

It doesn't come up, but there's black molds right underneath of your living space. So think choosing tile on the ground floor or polished concrete is the most environmentally friendly thing to do.

But if you must have the If you're going to change out your ground floor floors, lift it up, get a moisture meter, make sure it's not wet, maybe wait for a rainy day.

Once that's verified, if it is wet seal it before you put on different types of flooring. What about air filters that you can buy? What brands do you like and do those make a big difference in indoor air quality?

Choosing the Right Air Quality Professional

They definitely help with collecting dust, and we want to minimize dust inside our house too, because mold spores can attach to dust and then it just kind of drops on places that we may or may not regularly clean, like corners of baseboards and things like that.

So having a good air filter and changing the air regularly will help you decrease the amount of dust floating around in the house. I would recommend anything that's at least a Merv 8. Okay.

And you can get this at Home Depot, Lowe's, at the hardware store. But just remember to clean it and change it often. What is the biggest myth about indoor air quality that you wish more homeowners would stop believing?

Number one is never spray it with bleach. Please don't spray. If you see something, please don"t spray with it. The other thing I see a lot on and if you go online, you know, for content, people post all sorts of things.

So if see that there's black in your washrooms, like, up above the showers and they're like oh you can't say bleach so spray vinegar. Well, you have a moisture problem.

So fix the moisture. Put a bathroom fan in there, put a dehumidifier in, there before you clean up the mold because you can clean it up every day. It's just going to come back.

Okay. Fix the humidity before fixing the molds. And the last one, I have so many, but I'll keep this short. The last is make sure that you address the source of the mould.

Don't go with companies that say we can fog it, because fogging is great. It's superior. it gets into all the nooks and crannies. You don't need to demolish anything.

Maybe that's the case, but mold has a source, it always does. So find the source. If it's a simple moisture issue, address the moisture, then go ahead and you fog and spray, But address that issue first.

Too many people get really overwhelmed and they say, okay, I'm just going to fog it. You might feel okay. It might kill something, but over time it's just gonna come back and you've wasted all that money.

Okay. Finally, what are the top three things a homeowner can do this week to start improving the air in their home? Well, it's beautiful weather right now in February, so open those windows, change out that filter that may have been forgotten for a couple of months.

So let's see. And yes, vacuum and clean all of your air registers. Okay. Take a vacuum. If you have a HEPA vacuum, even better. But if not, taking one step in the right direction is better than being overwhelmed and not doing anything.

Right? So go in there, clean off those registers, spray it with some vinegar, wipe them down, change your filters, and also take a look to see if you have rust on your registers.

Do you growth on you registers? Or is it just very, very dusty? Those will give you some indications of the health of lungs of your home. Awesome. Well, if people want to get in touch with you and see about getting an evaluation of their home, how do they do that?

They can visit us at greenhomesolutions.com. Type in your zip code and you'll be able to find our contact information. And then you can always contact me directly.

I'm always happy to consult and give you some ideas. We're not medical experts. That's why I have a lot to learn from you, Dr. Ward. But in terms of the health of your home, we might be to point you in the right direction.

That's great. We'll put your information in the show notes too. Awesome. Thank you. Absolutely. Well, thank you everyone 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 in what you heard, don't forget to hit the subscribe button, share the podcast with someone who needs it, and leave a review.

It's the best way to support our mission of bringing powerful health solutions for more people. So for more resources, updates, and behind the scenes content, visit drjuliaward.com.

And until next time, stay strong, Stay healthy, And keep living on the functional edge. Thank you for joining me on The Functional Edge. I hope today's episode gave you fresh insights and practical tools to level up your life.

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