Optimizing Fascia Health To Improve Energy Transmission Transcript

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Introduction to fascia and Dr. Shay's background

– Welcome back to the global energy healing summit two point oh, I'm your host, Jason Prall. And with me now I have Dr. Samuel Shay, he helps busy health conscious entrepreneurs moms and mom preneurs improve fashion health through nutrition and functional and genetics testing to have more energy.

Dr. Shay walked his own health journey from being chronically unwell from the age of 6 to 18, including severe fatigue, anxiety, digestive problems, chronic pain, severe in and poor nutrition. He dedicated his life to natural medicine to get himself and others well, which led him to genetics testing and functional testing.

Dr. Shay has a unique relationship to fashion. Having been in the bodywork field for over 20 years, including chiropractic massage, acupuncture, facial and muscle rehab and eight years of fashion based martial arts doctor. She is also a stand up comic and uses his comedy as edge attainment on his Youtube channel along with his other teachings, Dr. Shay, welcome. – Thank you so much. I'm really excited about this topic today.

Fascia is a really, really, really interesting phenomenon and I feel it's one of the frontiers of making this emerging of both very modern medicine and kind of this more ancient wisdom. It's the tissue that I feel is the most mysterious at this point and it's the one tissue that I feel that can fuse modern technology with ancient wisdom and I believe it is the fashion.

– It is interesting, right? You call the phenomenon, I believe it is that right? It's something that we, I think we sort of thought we had figured out that it was just the sort of thing that held things together and it was just this surface, right?

But then as we look closer, we find that it's it goes into every cell of the body, right? Like that is fascinating. And one could argue that it fundamentally is the liquid structure and superhighway that conducts energy and transmits information perhaps faster than light.

Like it's just this very like quantum technology that we have in our biology. So I'm super excited to dig into that. I know you've got some slides that you can pull up to and I think it's really important for this conversation because of the structural nature of it. It really helps to see what's going on here.

So I'm curious how did you really did a lot of body work? Is that really what got you into this idea of fashion and really discovering the importance of it? – So, fashion was a very roundabout journey and and just to give people kind of an overview concept of where we're going with the discussion of fashion, which then I'll back fill my background how I got there is that most people thought of fascia as glorified corkboard, where you just kind of stick the organs on and it's not a corkboard, it's actually an extremely complex three dimensional, semi liquid, semi crystalline liquid circuit board, in which all the organs are interconnecting and inter communicating from the fashion.

So the circuit board is fundamentally a part of the entire structure. The individual pieces on the circuit board don't really work without the actual circuit board there in order to act as the relay communication system.

What fascia is and why it matters

And this is the the the fashion show is basically a victim of the Cartesian logic and that, you know, there's a separation between mind and body and then it kind of goes further. It's like there's a separation of organ to organ and there's a separation of this tissue from this tissue and it's all just cart to cart all the way down. And everything is just this mechanistic thing and in some ways that the fashion answers the question of inter communication from a tissue level. And we're going to cover some of the deeper science behind it, actual experiments that have been run that explains the actual structure of fashion, why it works the way it works. And I also firmly believe that there's a very specific layer of the fashion that is the acupuncture system, you know, and I'll share how I came to that

conclusion.

So, my background in coming to the fashion show started with, you know, I knew I was going to be a doctor when I was six years old, I was supposed to be a third generation medical doctor.

But due to my own chronic health issues, I took a hard turn into natural medicine because Western medicine was not a fit for what I had going on and when I went to college, I was studying premed during the day, but doing a holistic health practitioner degree in the nights and weekends. So it's kind of this weird batman thing where I was like organic chemistry in the day, you know, massage, acupressure and functional anatomy stuff in the evenings. And I was introduced to Chinese medicine in college, not just because there was this local school, I would go down to get treatments from, but also within the acupressure systems in Shindo, specifically there, they were talking about channels and flows and, and I would see changes from working with people, but I didn't, I always thought it was like nerves because I didn't have a concept of fashion until later on, when it was taught in some of the later classes of, you know, in the academic classes, they didn't really talk about fashions, except the annoying stuff that was in the way to get to the organs, you know, or like that, it's like, it's just that stuff that connects the chicken skin to the chicken breast and it's like, okay, and I looked at it and I was like, well, it's like this weird like gooey spider webby, like strangely tough yet super flexible glue. Like it was weird, I mean, it just, it's like something out of an alien movie, you know, like you didn't know what it was, but it didn't seem very important because there was, it was a diffused gelatinous structure. There was no we have such a visual bias as bipedal hominids. There was no like solid thing, like it's a liver, it's a kidney, it's an adrenal gland, it's, you know, and then tubular intestines, it's it's just kind of this goo that has some texture to it and some strength to it. So there I believe there's a there's a there's a bit of a visual bias against the tissue. And then when I got to chiropractic school ma we were then doing dissection labs and I was very, very involved in the dissection labs and it was like giving the teaching assistant and all that and just looking at all these cadavers and looking at this, this connective tissue and I was like what?

And I was I did a lot of meditating also and I was doing a lot of kind of different types of Eastern practices. And there was these discussions around key energy etcetera. And there was all this vagueness about how all these systems interconnect in different energy centers and movements.

And it all just seemed really vague and a lot of um spiritual posturing on the Eastern side and Western arrogance on the western side and you know what I mean?

When I say that – Like totally, I know exactly what you mean. Because as I like to, I like to find the connection between the two, right? That's where the gold is is we can figure out how eastern and western philosophies have marry up.

That's there's something really really important there. – Yeah so my sense of fashion really came to the fore when I started studying evolutionary biology and that because when in doubt always go back to evolutionary biology and go back to evolutionary psychology and just understand that the most important things are conserved over time. And there was a couple of key instances in my studies that just woke me up about or drop the seed of influence that was later discovered in some cases like eight years later. So one key insight I was sitting in I was sitting in cells and tissues class first trimester of chiropractic school in the beginning of 2005. And then they're talking about the different types of collagen. Type one collagen which and type two type one collagen that's more like the longer collagen.

It's like tensile strengths. The longer like tendons and ligaments. And the the analysts of the spinal of the of the disk. And then type two is kind of the nuclear apoptosis of the disc.

I thought to like like Hercules like to like holding up two pillars of the spine. And then you had this thing called type three collagen which they say is only in the lymph nodes and the spleen. They showed a picture and it was this and I was a fan of Buckminster fuller when I was sitting and I saw this and I was like that looks like a buckyball. It's like like a giant like biological honeycomb inside our bodies.

And if you know anything about Buckminster Fuller and this geodesic dome concept and this honey almost like a honeycomb concept, it's an incredibly structurally sound three dimensional structure to create three dimensional

resilience against compression forces. And it just and when they said when my instructor Dr. Campbell said you know he's brilliant man, one of those brilliant biochemists I've ever met in my life, like he said, it's only found in lymph nodes and spleen in my head, I remember the moment and exactly what I said and I said into myself, that's like I I swore it's like that is complete B.

Research linking fascia, acupuncture, and energy flow

S. There is no way that type of three dimensional structurally sound tissue is only in the spleen and the lymph nodes. That's impossible because there's something that's strong structurally, it's got to be somewhere else. Well, guess what?

Guess where we also find type three collagen in the fashion. So when you have when you combine like type one color, like longer strings of fashion, which is kind of the longer tensile strength with this kind of three dimensional compression strength then that's we can understand how fashion can have this it can have this nature of being very strong in all directions and that it gives a resiliency. That's why that gelatinous goo is so, like weirdly strong, no matter what you did to it.

So that was 11 insight where it just came out of just evolution, the defiance of knowing evolutionary biology's principles, that there's no way something that structurally sound is just kind of limited to two relatively minor organ systems.

So that was that was the first insight. The second I was studying with Dr. Jeff Spencer who was the chiropractor for Tiger Woods and Lance Armstrong. And he talked about he talked about the fashion in depth and actually mentioned showed showed a showed a picture an electron microscopy of an acupuncture needle in the fashion.

And you can see the fashion whirling around. It looks like a cyclone viewed from the top down, that the fashion like spun itself around the needle like wrapped it.

And as and like I'm also an acupuncturist. And and you could feel and see like sometimes the needle go in. You can feel this almost like winding effective sometimes when the tissue underneath it.

So, that was captured on on the electron microscopy and Dr. Spencer also spoke about Professor Joey Jones and I have a slide, I want to show here on Dr. Jones's research. Okay, so this is just the cover slide, fascist science energy that that's me and my stand up comedy stuff right there.

So this is the slide Professor Joey Jones and now this slides a bit dense on the words. So I'm just going to kind of narrate, it's the journey is worth it to see what's going on. So what Joey Jones did was, and this is a link to his information that he's passed since, since camera, what year he passed. So if you flash and I flash and flash a light into your eye, because everyone's thought well, is is there's energy or intention to travel on the nerves and then it doesn't make sense that it does because I also have a background functional neurology. And it's too slow the nervous, it's too slow. You can't it doesn't work.

So Joey Jones proved it. So what he did is if you flash a light into your eye, the distance from your eye to your oxen put, which is a part of the brain that receives visual stimuli.

Okay, so you got the distance from the eye to the to the occipital about that long and it takes 200 milliseconds or 200,000 microseconds that 200,000 microseconds, which is the same as 200 milliseconds. That's an important shifting the units here, you'll see why It takes 200,000 microseconds to go from light detected in the eye to be picked up in the visual Cortex. microseconds. Okay, now you then put a needle in the eye point on the foot which is bladder 67 which is the pink outside of the pinky toe. Okay, very big difference between going from the eye to the back of the brain, distance wise from the toe all the way up here and you've got way more nerve you know in the synapses and all this other stuff going on from the toe going on up to the to the brain there. So it took only 0.8 milliseconds or 800 microseconds to get from the outside of the pinky toe up to the same part of the brain In the occipital lobe.

So that's 800 microseconds. So the difference between 200,000 microseconds from the eye and 800 microseconds from the foot. So to give perspective It's imagine it's 100 m. You convert the 200,000 microseconds into 100 yard football field and you compare that to the 800 microseconds from the foot, that's 8000.0 0/4. The amount of time to travel which which is the equivalent of 14.4 inches. So it's time wise it's 100 yards from here to here versus 14.4 inches from the foot to the oxy put.

So there is no physics on the planet that allows nervous system to conduct that fast. That does not happen. You cannot have one nerve transmit hit the end of it. I have to go and transport all the nerve transmitters across the synaptic gap through the vesicles and the diffusion and all that.

And then stimulate the next night and the next one. It is impossible. It does not happen. So there's only one other tissue that is that interconnected from foot to brain.

That doesn't have these synaptic gaps or effectively, you know, speed bumps or air gap bumps rather to interrupt the flow. And it's the only tissue that has a, a bizarre enough structure that can basically pass electrons at uh not exactly the speed of light, but you know, close enough like for close enough for our purposes.

I don't want to go to like, like I think like there's discussions around quantum physics and jumping and leaping. Like that's not the scope of that someone else's interview, not mine. Okay. You can, you know someone else on that, that's not what I'm here for. So what what happens is that it's the only the fashion makes any sense. As as that highway and to conduct electrons that fast through this kind of liquid electronic conductive, semi conductive material.

So I want to pause if you want to have any questions or thoughts or comments on Joey jones research. – It's amazing. – So then the next step was in studying martial arts and it was a very, it's a specific type of martial arts. That's not.

It's kind of obscured. No need to discuss the details. Just that we focused on fashion. And I was shown this video from Jean-Claude Guimberteau the French with 2 I believe is his name is a picture of him. He very much looks like a French scientist and he's kind of stock character out of Hollywood casting.

And he had, there's only one video now on Youtube used to have all four called strolling under the skin. And what he's done is he inserted micro cameras into living tissue. Like let's just put it under people's skin.

And you can see the fashion, there's a picture of it in the bottom, right? You can see the picture of it looks like this three dimensional gooey spider web. And and the thing is is that the more you stretch it out, the more little spiderweb tendrils pop out.

Its fractal, it's actually fractal in nature. So like you open it up and it basically expands into like smaller and smaller geodesic domes and then it collapses back in to larger geodesic domes and it's incredible, like almost accordion, like bucky, like three dimensional buckyball that just Accordions in and out of itself.

So what happened is that in the third video, he talks about muscle and he made this tangent about the paramecium and the parents. So there's three layers of fascia, there's the the museum, which is the outer layer, the paramecium is the middle layer of the endometrium, which is the smaller and the best way to describe these is if you go to Costco to buy a package of 12 boxes of Prince Spaghetti noodles, I don't recommend you do that for health reasons, but for science we're just gonna imagine it. Alright. So if you go to Costco and you have these 12 boxes of Prince Spaghetti noodles, linguini, okay, long long noodles, the plastic that wraps the outer 12 boxes.

That's the epitome Z. It's the tougher outer layer wrapping all 12 boxes. The paramecium is the box, the is the individual boxes. The individual layer wrapping all the noodles or the fibers inside.

Then the endometrium is the little super thin layer that's around each individual noodle noodle. And that's the same with with the like the dura mater, the arachnoid and the pia mater. It's you know, Epineurium, Parinarium, endoneurium it's the same three layer structure and it's all the same tissue. It's just it's interwoven, it's the same

stuff. So that's the best imagery I could come up with to explain this three layer system is the Costco Spaghetti box visual so he made a comment about the middle layer. The box layer, The paramecium.

He said something very interesting. He said it was interwoven with multiple organs and parts of the body and it was like the longest track, basically of fashion and it had perpendicular projections that came out of the paramecium towards the skin.

Now, when he said that he said it kind of in an offhand curiosity, this bizarre perpendicular projections towards the skin at regular places. I literally, I was laying, I was laying back on the couch, I literally jackknifed off the couch, Frankenstein style, pointed at the tv and screamed like an idiot in front of the whole class.

That's a wrap acupuncture point. I literally f bombed the entire class, like, like a raging maniac screaming at the screen, yelling and coherently that he just described an acupuncture point.

And so the class kind of turned and they know I'm like, I have this nerdy proclivity. So they, they kind of like, oh, that he's just doing that, like, and so they stay paused and they let me kind of, process, process out loud, just my jibber, my gibbering like, excitement. And it was because I had already gone through acupuncture school at that point. And, and he's he literally named the physical tissue of the acupuncture system. What is the acupuncture system?

It is a interwoven system that influences one place that goes in interviews between organs and goes across the whole body and is relying on very specific points and reliable intervals on the body, like, and what is the perpendicular perpendicular line going this way, going up, going towards the skin towards the like, and it's literally the whole thing just flashed in my head as soon as he said it.

So this is to me, the acupuncture system and it is absolutely fashion. And I believe it is specifically the paramecium that box layer of using spaghetti analogy. So that's the bigger picture of all the pieces kind of coming together.

– Yeah, I love that. And I mean, another sort of visual that came to mind as you're describing, that is kind of the nation's highway systems. – Yeah, yeah. – Right? It's like the acupuncture meridians would be like the highways that connect all the States and all the Cities.

And then of course, we got little roads within those Cities, but that's a critical system for infrastructure, right? To move goods and services around the United States.

And this is again, I think once we start to connect these ancient practices, like acupuncture in our sort of Western logical mind and we can go, oh, that's why it works. Then we start to accept them more and more, right?

How fascia affects aging, trauma, and inflammation

And then we start becoming, I think more aware from a scientific perspective, now, we can get dollars behind some of this stuff and we can actually study it, right? Like this is, it's kind of the peace in my mind that is sort of necessary for big dollars to kind of go get behind some of this stuff in a big way, and we're certainly seeing this, right? Acupuncture is now becoming more mainstream, The military has been using it for a number of decades now, it's becoming more popular. Insurance is starting to cover this stuff, right? So it's becoming, I think more accepted and more people I know I've granted in southern California.

So acupuncture is perhaps more of a commonality than maybe some of the midwest for example, But I'm seeing it more and more, I'm hearing people talk about it more and more.

It's not sort of this kind of woo woo thing that may be used to be in these sort of friend circle. So I think it only helps when we can understand how fashion is playing a role. And so I'm curious beyond acupuncture the question. So what does this mean now that we have some basic understanding of fashion, what do we do with this information?

How do we implement this into our lives and make use of this? – Right. And the leap from, from science to

pragmatism is I think what you're asking like as a clinician, the most important thing is, does it work? You know, that's the important thing and that's that's ultimately why acupuncture is so successful is because if it's done right, it works.

The military does not like to use things that don't work like that, that's pretty clear. And, you know, a lot of military using scalp acupuncture or regular therapy. And other other things like that.

So my, what do we do with this information? And if we know that the acupuncture system is like, you know, we'll just use the acupuncture system as an outgrowth of fashion.

It's kind of nested underneath that. So a couple of things to a couple of things to examine one that, you know, doing bodywork, and also in this concept of, you know, trauma informed work, whether it's muscular, musculoskeletal work or psychological work that there's a concept of the issues are in the tissues and that many people have experienced. I've certainly worked on, people have seen this in real time that you work on a tissue and then suddenly all these memories come up or or other things that were blocked suddenly emerge.

And if you were to look at, you know, is consciousness in the brain maybe I think it's a huge part of it. And so if I were to pick a tissue in which consciousness would be housed, of which the brain is a massive amount of in it structurally interwoven, it would be fashion. And so when I look at people, when I look at people who age who are not people who are elders, but who are holders, what is aging here, I posit the primary thing that is aging is the fashion.

It's the circuit board, what is more important, the thing that is on the circuit board or the circuit board itself, we don't think it's the circuit board because it's almost invisible because we assume the circuit board is working for all the other fancy things we put on it.

But if the circuit boards busted, what is the use of everything else really? So to me, aging, aging is primarily a decay of the fashion. That's so that's practicality. Number one.

So what can we do to help? Why do we want to focus on fashion? Well, it's our, possibly our consciousness may be in part or in whole interwoven into it too.

That is what I believe ages three. Well, if you want all the rest of your organs to work well, then you'd want to really focus not just on set organs, but focus on the circuit board system that interconnects all of them.

So how do you make that practical? So what helps fashion? Well, we know it can hurt fascia and so we can start going from that angle, tearing it, cutting it in like scar tissue. Like when you take the highway and you just suddenly have a, you know, have like a cyclone come through and just take off, you know, a piece of the of the of the interconnection system of the roundabouts or whatever that's a problem. So then the body can work around it, but, you know, you've got debris, the highway system has been damaged, you're taking all the side roads, it's not efficient.

It's not as fast, It's not as effective. So it's creating like an interference field in, in the body tissues itself, like the transmission of energy information is just weaker and not as efficient. Yeah. And it's, it's there's a use the word field there, which I think has multiple meanings.

So field can be like, it's the whole area or it's kind of more of like an energetic field where there's distortion going through. I'd say that's an absolute part of it.

I'm also talking just structurally like stuff's broken message can't get through, you know, despite the loss of the, you know, the harmonics of like the the environment has been damaged. It doesn't look as pretty and like you don't want to kind of drive through that area cause it looks a little broken, like it just is broken. And the other thing that really has an influence on it is the are the, is the transmission system, is it waterlogged clogged, damaged appropriated or, or otherwise otherwise jammed, like say from inflammation.

So things that really affect the fashion would be things like inflammation. So if you've got these inflammatory chemicals and extra water, like swelling in there, you're gonna be disrupting the normal chemical communications that are happening in the normal electrical communications that are going on.

So, and when you look at what is inflamed. It's not just the Oregon, It's also the fascist surrounding it and that's interwoven into it. So when we look at what was the most important, what is the most important thing that we can look at to help with fascia. It's to ensure that we keep our inflammatory levels really well modulated and really healthy. And that we're not just it's that like swelling is not minor, swelling is important, like inflammation is important.

The whole point of inflammation is to rush in and repair damaged tissue and to kill pathogens. Like if I'm a hunter gatherer and again, evolutionary biology, evolutionist psychology, if I'm a hunter gatherer and like I do tons of genetics, I'm quote over in flamer, like I've very exuberant inflammatory genes, which you would think, wow, that's really stupid.

Why would I, why would a nature, you know, allow for such variation to have some people are less inflammatory versus more inflammatory from? Well, if you go back far enough, it makes total sense.

If I'm a hunter gatherer and I'm, you know, bitten by, you know, I'm hunting a large animal with a tiny stick, there's a pretty good chance to get bitten gourd malls swiped trampled whatever.

And so if I'm bit and then my hunting party members next to me also gets bitten the exact same way if I have a more exuberant inflammatory response. I'm gonna Russian more red blood cells and more white blood cells to red blood cells to repair the tissue, the white blood cells to kill the infection that just injected into my flesh from the bite wound. But my less inflammatory prone hunting party member is gonna more have a higher percentage of dying acutely from that wound.

But chronically I would be more prone to chronic diseases and my hunting party will be less prone to chronic diseases because I would have higher levels of inflammation from trivial stimuli over time compared to this person. So as in nature and evolution of biology, biology, it's all things trade offs, all these trade offs.

So if I'm more pro inflammatory prone today, it is a mismatch with my current environment. It's not a fault of the genetic recombination for my mother and father to form me, it's the environment I am in does not match the evolutionary context which my genes evolved.

So that's why higher genetic inflammatory prone people like myself really struggle in today's modern world where it's not an evolutionary advantage to recover from injuries because relatively over the past, you know, 2000 years we live in a relatively injury free violence free society, relatively obviously there's major, you know, points of data say, you know, World War 1, World War 2, etcetera. But on a local level, violence has been decreasing over all around the world, even though we have larger lenses into local violence through social media and we still should be on them to examine to make sure we can help with those situations.

So it's a long kind of political asterisk there to say that hyper inflammatory or prone people genetically, such as myself, are in a mismatched environment.

And so what happens for people to do practically today is that we have going, we have the tools today to properly evaluate fashionable health. So that means genetics testing. And that means functional testing and looking at things that disrupt fashion by provoking inflammation.

And that's one of the most practical things that we can do. I would like to show is some of the examples of what testing looks like for people. It's genetics and functional.

– Yeah, that'd be great. And that's not a lot of people talk about the testing aspect of the national network. So this would be fantastic. – Yeah. So what the testing, I'm not talking about taking a biopsy of fashion. I'm talking about doing tissue samples like, like cheek swab for genetics or doing a mitochondria test, which is urine and blood.

There's other testimony when you're looking for all the markers that show inflammation are a causal of inflammation or that influence its removal and repair and resolution. So for genetics, for example, you wanna test genetics to see if you're an over in flavor like me.

So I had joint pain in my joint, I had joint pain in my early thirties and late twenties, like an old man. And it didn't make sense until I did my genetics and I found out I was an over in flamer and then once I made the changes based on my genetics, my joint pain went away because my inflammation shows up as pain and just kind of disseminates throughout. So that's one example.

Other people. Their inflammation shows up his weight. So this is one example of how inflammation you know, is related to see. In essence, this is discovering magazine inflammation is the root cause of multiple things that a lot of people are worried about. My father right now is going through Alzheimer's and dementia for example, and that we talked about genes that the point of inflammation to deal with infections and injury and that the problems are if people have an exuberant response, it can just turn into a bonfire and cause all sorts of problems or stick around six around doesn't get questions like chronic inflammation like hot coals.

So when we're looking at genes, we're also looking for the anti inflammatory genes. Some people have fire hoses, other people have squirt guns To get rid of inflammation genetically. And then this is a research, this is a summary paper from Australia in 2009 where it was called weighing it up, obesity in Australia that 70% of people's obesity is related to genetics and most of the obesity that I see is not from calories, it's from inflammatory water weight retention.

So one of the things that effect that you can find out genetically is our people vulnerable to histamine intolerance. And so histamines is like when a bee stings you, it doesn't in your arm swells up, it doesn't inject a half quart of water into your arm. That doesn't do that.

The bee stings you and the body has a histamine response to rapidly rush water to that area. Why? Well, evolutionary biology that venom is literally going to poison or corrode your muscles nerves, blood vessels, tissues, it's going to melt your, it's gonna kill you one way or the other.

It's corrosive or poisonous. So what the body does the solution to pollution or in this case venom is dilution. So the histamine response is there to rapidly swell the area with water to dilute the toxic venom from causing damage to the tissue.

Makes total sense, right? But there's but it's a trade off. Evolutionarily if you have too much histamine response then the swelling can choke off, ironically the very arteries and nerves are trying to save. But if it's too little then the venom will go in and corrode. So it's this trade off just like the inflammatory genes or trade off. So genetically, if you're prone to hyper histamine response. This is really important because the swelling affects your fashion. And you can eat foods that either have histamine increased release of histamine within the body.

Endogenously inside itself or blocks the breakdown of histamine. So three types of foods that deal with histamine.

Using genetics and functional testing to assess fascia health

They either have histamine, they increase the release of histamine from within the body, or they block the breakdown of histamine. So if you eat any or all of these types of foods into your digestive system and it creates this response in the whole body, basically creating a slow moving beast ng across their whole body.

That image of just a slow moving systemic bee sting and creating this layer of water weight all over your whole body. No amount of exercise is going to solve that.

People who struggle I exercise all the time, but I still have this extra layer of water weight, I just can't get rid of it. Start myself and I just can't get rid of it.

I've lectured at genetics conferences on this very phenomenon of inflammatory based obesity. Like that some

people like the more they exercise, they create more inflammation. If they've got the genetic disposition towards it, they actually put on more weight and it's it's affecting the fashion, it's affecting everything and the water is just thrown into the fashion levels.

I mean, this is like for people, they have this experience that if they're hyper and flavors which then will affect their fashion to this is I can call it like the muffin test.

Like if you eat someone eats a half muffin, but they put on 1 to £2 or £4. It wasn't the muffin. it was the chemicals and sugars and gluttons or whatever that are in the muffin that trigger the inflammatory response and then create this water retention to then dilute the toxic inflammatory chemicals because their body is trying to swell up to dilute them down to do what to buy, the liver and kidneys. Time to filter these toxic chemicals out.

So this is the muffin. People have this muffin test where they just eat a little bit of inflammatory food and they put on way more weight. I mean, unless that muffin was last year's, we get the Christmas fruitcake, it didn't weigh 2 to £4. Right?

So it's this hyper response like the bee sting to food but not a bee sting. I'll just show you some examples from the genetics and the good news about genetics is that there's epigenetic meaning that lifestyle can change your, your the negative gene variant the so called red dot or yellow dot, Those will not change, but you can change their behavior like those genes will not change to green, but you can change make change of behavior to behave green like like green, like so here's an example and people can ignore the hieroglyphics that are, you know, and the hex to decimal designations over here on the left, just ignore that. Just look at this, Look at the yellows and red dots here and these are the 15 most important genes for inflammation and they're broke into three sections over initiation over sustaining of propagation, under clearing. And you can just look for clusters and you see that this person is an over in flamer just because it's it's a clustering of the genes and the goal is to find lifestyle changes, diet, nutrition, exercise, sleep, lifestyle, that what's the fewest number of things that will affect the most number of these red and yellow dots. Not to find one thing per dot.

That's so inefficient. You want to find – Real quick? How would you classify sort of over in flavor? It's a little more tilted as it sort of more like more than half are in the yellow and red of the that category.

– So it's in broad numbers in on average is it's it's definitely more than half. But there's also some genes are more important than others. So the under clearance. So the genes that extinguished the interleukin tens these bottom three. These are the most important because no matter how big a fire, small fire it is really. But you can't put it out, stuff's gonna burn eventually.

There's other real keystones, TNF alpha and interleukin six. There, there's a different way to express them in terms of interconnectivity. Like the spider web at the center is like TNF alpha interleukin six as as as like the most important as is understood. But then there's other things like the crp genes if you get a triple in here, Crp 12 and three, that's the acute phase inflammatory protein that comes out of the liver. If all three of those have negative variants in them, that means that any time you are an inflammatory state your liver is really struggling because the liver is the primary thing that clears inflammation but it's struggling already with all of its extra inflammation.

So if you get, you know really over inflamed and you've got some really unfortunate combinations of variants, it's gonna it's gonna snowball. And these are the people that have like they just kind of layer inflammation rapidly.

Like it's just a massive problem whereas other people seem to just like have it and it's gone or other people, it just kind of balloons and so it has to do with various combinations and clustering. I know it's a bit nerdy but like, – No that's great. And can you get this these results from kind of running at 23 and me and then filtering that through a program that maybe you have or or somebody else – That is possible. So 23 and me in ancestry.com there there are those do have large data sets. There are other companies that have their additional companies as well that have similar style of data sets.

My the thing about getting genetic data more more data is not better data. It's more prioritized and organized and implemented. All data is better data.

That's I actually have a slide, I don't have it on this presentation called 23 and me syndrome. So 23 me syndrome is do you have the promise if it's gonna be super easy to understand and practical and prioritize and you can have all the help in the world to help you and then when you get it, you're overwhelmed, frustrated and scared. And there's there's no and it's like people like getting the genetic data. The tests itself is really cheap.

It's the analysis under the supervision of someone who's really trained in this and that can take into account all the other cast, all of everything else.

Not just the genetics, but all the functional tests as well. – I just want to reiterate this point because a lot of times you go on the internet, you might read something about some genetic snip and then you think you have an understanding of your jeans and like I've taken some of these sort of genetics courses and functional testing on the genetics and it's like even I I feel like I have a pretty good understanding of this stuff and it gets complex very quick and then you start listening to various educators who work with this stuff on a regular basis and there's differing opinions.

So this is it isn't even clear cut by any stretch. And so working with somebody that you feel confident in that has a lot of experience in this and organizes it specifically is very, very important.

– Absolutely. And I encourage everyone to really dig into what is other meta principles in genetics that we can look at. So here's a couple just for people to just walk away with.

Number one genetics has a hierarchy. Alright, inflammation is the most important driver of disease we have underneath it is scavenging free radicals in the mitochondria underneath that is looking at liver detoxification pathways underneath that. It's like vitamin D receptors underneath that is methylation. Now, most people think methylation is the biggest thing ever. It's amazing.

It's subordinate to inflammation and people fixating on things like mth fr you can go down as deeper rabbit hole as you want and pay as much as you want when you go down this methylation concern. And what happens is that m th fr is one gene, there's also th far too also Mtr Mtr there's B. H.

M. T. There's cBS, there's gcl si down the pathway further down from the CBS. And there's there's food to T. C. N. Two. There's actually like 15 ish major genes along with just m th fr those 15 are subordinate to the these 15 inflammatory genes we just saw in the first place.

So it's like there's a hierarchy. # two is looking at what are the genes that are actually practical. So there's some genes that have actual research done on humans to show that the lifestyle changes alone beneficially shift the behavior of said genes into green like behavior because a lot of studies are done like wombats and nematodes and what and mice.

That's great. But it's not done on humans. And so you need to have a genetic analysis that's done based on the human research, not the wombat research.

You also want to look at the genes that are part of the seven major drivers of all diseases, not fixating on the disease gene itself. The quote unquote disease genes are downstream because you look at the drivers of all diseases, inflammation, free radical damage, liver detoxification, utilization of vitamin D. Why vitamin D.

Vitamin D. Controls estimated to 5% of all genes. That one thing. Methylation, cardiovascular circulation and then the fat energy metabolism. Those are the seven drivers I'm not looking for. I personally don't look for the heart disease, the cancer gene, the Alzheimer's gene, the stroke gene or whatever.

Like I'm looking at the drivers now, is there a place to look for those individual genes for sure. But those are downstream. Those are worth looking at. But the upstream ones are more important in my humble opinion. So when you look at, bring it back to fashion, getting a proper genetic analysis that will then empower you.

That's the key. You want your genetics analysis to empower you not scare you because the problem with like

Western genetics and functional genetics is that Western genetics is looking at the genes as a villain.

Like we gotta find the one bad gene, like the one bad germ. It's basically approaching genetics the same way they're approaching germ theory and they're not looking at the terrain or Bucaram's perspective on germ theory, which is you gotta look at the terrain. So functional genetics is not fixating on one gene. You're looking at like in that last slide clusters of genes, what is the narrative? What is the genetic environment in which then the environment, which the physical environment is then interpreted through then manifest as whatever health expression you're going through. So knowing knowing genetics is one of the highest, highest leveraged investments. One can possibly do because it's a testimony to do really once. And functional tests are great, do functional tests all the time. But it's a thumbprint on where you are right now, which is super valuable genetics test. Won't tell you what your, you know what thyroid level is now, what amino acid deficiencies you have now.

You know, if you have enough omega three or two omega six ratios or whatever, it won't tell tell you your levels of B vitamins and won't tell like it doesn't tell you what it is now. Your genetics tells you what is your opt, what is the optimum you're aiming at what are you, how are you likely to express based on the lifestyle you live and what exactly you can do to mitigate all of the genetic fault lines you've inherited because everyone's been born with genetic fault lines.

And so, knowing your genetics is gonna set you up for lifestyle changes permanently. And then you use also functional testing to get a check where am I now in these specific markers in service to whatever my health goals are.

– And real quick because we're not out of time. But I really want to ask you about some of those testing because I don't end it here because I feel like you've got more when it comes to maybe organic acid testing or metabolic and like what are the other things that we can look at to see some of this information that might be going on that's affecting the fashion. – Absolutely. So the tests are there's five major categories of tests. There's hormone testing.

So, adrenals, sex hormones, which is the most famous one is the dutch test and then there's thyroid. Now these relates to inflammation in the following ways. Very briefly, adrenals secrete cortisol, which does a lot of stuff.

And one of them is it's the bodies one of the body's most important anti inflammatories. So your adrenal glands or and what I've listed here is like examples of the companies like Genova, precision analytical, doctors data. You know, there's there's there's different, there's different tests available.

Different companies that are reputable. So, and you want to get the six spot salivary test with the cortisol awakening response. And that's I'm just gonna I'm not gonna take time to describe it now.

But it's called the cortisol awakening or the car response you wanna. That's been a new development, relatively new development to add on to check your adrenals.

So if your adrenals are if your dreams are imbalanced then you're gonna affect your cortisol levels. It's gonna affect your ability to control inflammation. Sex hormones are important because if you've got first off your behavior changes and you you're more prone to are less prone to different types of behaviors that may cause more or less inflammation.

Also it's your ability to repair and rebuild is predicated on the health of your sex hormones. And then thyroid, if your thyroid is a skew then people who have low thyroid they just swell up. Just doesn't matter of course, you know, and you want to get functional testing, not just TSH okay, there's way more metabolites. Check and here's the big sick.

Here's the minimum six listed right here. TSH free T. Three free T four verse 23 antibodies to thyroid glove in antibiotic era. Proxy is the thyroid nerds will say. What about anti antibodies that I get it fine but that's so rare. Only one case in my entire career did have no antibodies to TTG anti T. P. O. And they did have TTS only one time ever.

So 99% of time these six are fine then. So that's hormones. Then we've got gut testing. Now there's three main

types of gut testing. Same concept. Here's some of the lab's underneath the check them. So you've got the big gut tests like G.

I map G. I. Effects G. I. 3 60 C. D. S. A. That's been around since I think the seventies all sorts of this. This is the most important one to check. And I want to talk about inflammation. Most of the inflammation you experience is actually aside from like overt injury or auto immunity that is attacking your joints creating chronic inflammation.

It's in the gut because most of the immune systems in the gut. If you're eating things in your guts in flames and all it's like it just spreads out Now we jump to food sensitivities and tolerance is a lot of people spend a lot of money on food sensitivities. I think this is a very high risk low to moderate award. Here's why if this is my arm and I poke and I poke my arm on my skin doesn't really matter, finger just glances off let's pretend this is my intestines is a nice clear intact, very nice intestines is a piece of broccoli pops off.

Now let's go back to my arm. Let's pretend there's an open wound in my arm and I take my finger and I poke it do I have a finger allergy. No I do not have a finger allergy. I have irritating an open wound and irritated spot or whatever it is on my arm. So if your gut is inflamed, infected, irritated damage, whatever it is and a piece of broccoli comes by, the gut can only do one thing is create an immune response to it and you're blaming the broccoli. So there are genuine food sensitivities, intelligence, those absolutely exists. However, my take attend to and heal the gut first, then see what sensitivities and allergies are left over.

That's my take on this. There's also SIBO testing but like these are the three gut test. Please focus on this one first Gm at G. F. X. G. 3 60 C. D. S. A. Then we've got organic acids which I specialize in. I love this thing.

I study with Dr. Callous for four years. Like I nerd out, I lecture on this, I've got youtube videos on this. Like I love the mitochondria. I probably get off the slide quickly, I'm just gonna keep talking about. So this is the mother of all functional tests. This is the big one.

If you want a micro nutrient analysis. It's the it's the mitochondria testing if you want to know how your energy systems are working outside the adrenals.

It's a mitochondria test if you want to know fatty acids, amino acids, you know the core fat, fat soluble vitamins, all these other things how inflammatory markers in your brain nor transmit tablets, liver detox pathways like like ways glutathione is working in your body.

You want an advanced mitochondria test. There's different companies. Genova has the ion panel. Genova also has new travel metabolite mix. There's also other or protest um uh precision analytical that does the same GMS. They have the OMX test which they're kind of growing and expanding. There's all sorts of new competitors that that are coming online. Originally was the ion panel from meta metrics lab to Dr. Lourdes lab that got absorbed into Genova.

– But this is like measuring all the steps measuring functional pathway. So it's like showing where your body is, let's say doing well or whether it's coming up short and it's not executing, it's exactly like this perfect map.

And if you know how to read it, it's like you can start to see where it's short circuiting and where we need to sort of intervene, right? – Yeah, like this is an example right from the ion channel 20 you know these major amino acids and when you have low amino acids like this is a this is not enough people are here familiar statistics and Bernoulli distributions or bell curves but like this dot over in the low this is the bottom 2.5% of the average population. That's like really bad and you can see look for patterns. This person is massively massively like what is, what is collagen made of. It's made of like google icing, like glutamine slicing praline.

Practical testing categories and closing resources

And you've got all these other like muscles are made of. You know, I like the branch chain amino is like this purse, this is on an ion test, this on our mitochondria test.

Like you can't throw turmeric at this person, – Right. So this person is either efficient not getting any protein or they're eating protein and they're not breaking it down in a similar right? And so, so if you would look at this and go probably some gut dysfunction going on.

They're not breaking down their proteins. This is a big problem because you can keep eating all the protein in the world and you're just gonna be creating more information and not feeding your neurotransmitters, your muscle synthesis all you need. Right. – Yeah. So you look at gut testing here with the mitochondria testing because you know, breaking down protein.

It's first it's in the mouth where its mechanical, then it's in the stomach where the acids and the trips and all that stuff. Break it down further. Then you got the pancreatic protease is breaking it down.

But then the last place amino acid the proteins break down to amino acids is actually the brush border of the colon of the small intestine itself. So because amino acids, These these things are actually individual lego pieces.

Your cells can only bring in and use individual lego pieces and they have to be broken down into the individual lego pieces. So, and if your gut is thrashed, irritated, damaged whatever those the final stages you have two and three block lego pieces stuck together, that then go into the individual cells that line the gut that are broken down in those cells and then put into the base called the basil lemon.

But they go into basically into the bloodstream at that point as the individual lego pieces. So if your gut is inflamed or leaky or permissible or whatever, those lego piece complexes go in and then the body thinks that those are viruses or virus proteins and they launch these shapes seeking missiles, not heat seeking shape seeking missiles called antibodies that attack those weird protein fragments and then attack as collateral damage other tissues that look similar.

Like if you're in a blood and crips turf and you happen to wear a red shirt and you wander into a crip territory, you know, then you get shot. It's just it's the same concept. So you've got um you got all these functional tests that are really, really critical if you want to take a good long term health of your fashion and the rest of your body.

So, functional testing is the modern secret weapon to optimize people's fashion, to optimize their energy. – I love it. I say, I feel like we could go on and on. We just got into the fun stuff.

I love talking about organic acids testing and – I can do that later, – Hang out on the side and let people live their lives. But tell people where they can find more of your stuff.

You mentioned some Youtube videos. So where can they find more of the schools down? – So the first off they can go to my website, DrSamShay.com. D R S A M S H A Y.com. I have three e books, maybe four I think one is on the 10 pillars of health and functional testing, two books on genetics. But they take 10 to 15 minutes to read very, very quick, maybe 20 and one of them and had a genetic, all this information in much more detail. And also as of this recording, I am also have on my schedule a link where people can go on my website where they can schedule a free 15 minute chat with me if they want to investigate how they can use functional genetics and functional testing to optimize their fashion or any other concerns that they may have.

So just my website and then they can also put my name into Youtube. Dr. Sam Shay and they'll find, I've got about 100 videos on there. I've also got all my stand up comedy stuff. Very important.

Super important people go to that. That's actually the real reason I'm on the summit to tell people to go watch my comedy set and on, on the comedy set, I've got a lot of fun stuff on there.

It's observational, clean comedy. I also talk about what it's like to have asperger's, can you tell and what it's like to have asperger's and that's kind of one of my missions and comedy is to educate both the norm, ease and give words to the asp eyes on What it's like from our lens and from our viewpoint. And so it's, it's something I wish someone had told me 30 years ago when I was a kid.

Hey kid, you've got this thing called Asperger's, you've got these couple superpowers, this buffet of Kryptonite, this is what you need to do in order to adapt to a world that is not built for you.

Here's what you need to go learn. So I didn't get that. So I'm building that to make it palatable through comedy and scalable through Youtube. So that's my comedy's mission based and there's a lot of fun, observable observational comedy that surrounds it also, – It's awesome and I mean, I think you found your a great place to, to employ your super, I mean comedy is an interesting one for asperger's, that's hilarious that you're actually able to do that.

But this functional testing, getting amazing – Seinfeld's on the spectrum. – Really. – Totally. – Wow, it's just like this, keen noticing of all these little things like that that come into play. – Yeah, hyper observation and putting patterns together that's making unusual connections. That's what we got.

– Totally. Yeah, I love it. Well, you're doing great work and I really appreciate you coming on and please keep it up and everybody go check out his stuff.

I mean, those free e books are gold and I'm excited to check out your comedy too. – Thank you was great. Thank you so much for doing this. Jason. Really appreciate it.