

Caspar ([00:01](#)):

We're living in a sea of toxins, from heavy metals to forever chemicals. We've created a world where our bodies are consistently trying to remove harmful elements from them. The good news we've got these amazing systems and organs of elimination that if nourished and well cared for can help us survive even this type of toxic world. Today we're speaking with a leading nutraceutical developer who leveraged his knowledge of chemistry and biology to restore his own health after mercury toxicity and turn it into a leading nutraceutical brand. This is the story of Quicksilver Scientific with Dr. Christopher Shade. Doc. Great to see you.

Dr. Shade ([00:38](#)):

Great to see you Caspar. Thanks for having me here.

Caspar ([00:41](#)):

You know, I, I know a bit about Quicksilver. We have a little bit of a history we were going into before with loving the idea of detoxification, but I never quite got the story of how Quicksilver started because you've been around for a while. This is not a new company. I know it's blowing up in many ways and that's great to see. But can you give us the story behind the company?

Dr. Shade ([01:04](#)):

Yeah, I mean, it's kinda long, but I'm gonna keep it short here. But it's just like, how long have I been in natural health? And I was in undergraduate world and quite frankly took a bunch of acid and changed my mind heavily about what I thought about nature and medicine. You know, I was very sort of atheistic and, you know, western and, you know, saw a plant speaking to me and I was like, I think I'm totally wrong. And I left school. And I was a biodynamic farmer. Wow. And yeah, I mean, I started into that in the late, late eighties, early nineties. And I joked that I went out of it the year Whole Foods came around, you know, there was no money. And so I had this, you know, insight in the connectedness of all of nature and, and in farming, you know, how you build the microbiome of the soil.

Dr. Shade ([01:55](#)):

That whole idea of the microbiome is way older than functional medicine. You know, getting into probiotics, that was how we did everything in organic and biodynamic farming and, you know, but I wasn't making any money. And so I did a couple of things and I ended up going back to school looking at agricultural pollution first for my masters. And then at my PhD I found it just kind of a boring story. I was doing it at Illinois and ended up with this guy who was looking at the global biogeochemistry that's like how toxins circulate all through the biosphere and the geosphere of Mercury. And I got a PhD and my PhD thesis and a patent that came out of it were all around separating different forms of mercury. So you can look at the organic forms that you get from fish, the inorganic forms that are from geology are from your dental amalgams in people.

Dr. Shade ([02:50](#)):

And got that. Then started my company. I did a little bit of environmental testing, and then in our last recession in 2008 and , I jumped into health and applied that testing to health. I had early luminaries like Dietrich Klinghardt and Hal Huggins use, these are the original mercury toxicity guys take me under their wing. They started using my products and my testing. Well first the testing and then I developed the first products. I was like, if I'm gonna show this, I've gotta get it out, you know, along the way. You know, I had 17 amalgams and I'm like, yeah, why do I get sick every time I travel? Every time my kids get sick,

why am I tired? You know, I got an active brain, but the body can't support it all the time. And so I developed the first stuff for pulling mercury out through the GI.

Dr. Shade ([03:37](#)):

Now I did this because I used all those chelators using the DMSA and DMPS I almost kill myself with that stuff cause I didn't open up the organs of elimination. I didn't support the cellular levels of detox. So I was just stirring up that pot. And the first product I made was like putting a key later on, little sand grain and then eating it. So it goes through the GI and grabs all the metals there that opens up, that flow out of the liver, down into the GI, takes the pressure away from the kidneys where the chelators were putting it and just opened up everything up. That fixed me in a couple of weeks. And there, the next step that really got us to where we are was how do I get glutathione into the system?

Dr. Shade ([04:22](#)):

And that led me to liposomes and then nano emulsions as these ways to cheat absorption, get intraoral absorption, upper GI absorption where you may not have transporters or you may have enzymes that break things down. Then I could get glutathione into the system for a cellular level and had the binder there. And then there was development from there to understand the flow of the liver and how bile brings everything out. And that building up the whole system. So we have these large detox protocols applied to chronic disease, applied to general health and applied to longevity.

Caspar ([04:59](#)):

Now, I'm guessing that Quicksilver is a reference to Mercury and not the Marvel superhero. Correct?

Dr. Shade ([05:05](#)):

Yeah. Okay. And not the surfware brand. So Quicksilver is the old European word. In Germany it was quecksilber. And actually any medical person who used mercury in medicine was called a quack. Funny now that like quack watch and stuff, if you detox mercury, you're called a quack. Crazy how that changes. But quick means liquid, fast moving, flowing, and then mercury, I mean silver. And so instead of being hard silver, it's fluid silver, Japanese, it's swege, which means water silver.

Caspar ([05:41](#)):

Yeah. And you, you know, you and I probably know that heavy metals are a big issue, but mercury is, is is, you know, probably the biggest of the heavy metals right now. How, how many people do you think are truly impacted by mercury? Are we all impacted by mercury at this point?

Dr. Shade ([06:00](#)):

Most, most, you know, it depends. So, and it used to be all because, you know, when I started my business, it was like 80 little over 80% of the people had dental amalgams, which were 50% mercury. Those old silver fillings, 50% mercury, 48% silver, and a little bit of zinc and copper. And so everybody had those. And then if you ate fish, you had mercury. Now we're down to about 50%. It's more of a socioeconomic thing, whether you get the white fillings or the silver fillings. So less people on that end. And then how many people eat fish and which fish. So the majority of people are impacted by it. And it's a scale depending upon genetics in you and epigenetic factors, diet, other things coming in. You may be very sensitive to the mercury, or you may be less sensitive to the mercury. So it's a question of how much we're impacting. A lot of people are a lot more impacted than they think, you know, maybe half the people have it where it's really affecting their health.

Caspar ([07:06](#)):

What, what are the ways probably that if you're not truly, you know, mercury poisoning is one thing, but being affected by a toxicity and that toxic burden could change. Yeah. You know, from person to person and their ability to eliminate some of that. But what are some of the symptoms people would look out for, especially if they do have mercury amalgams and are saying, wait a second, am I being impacted by this? Or how do I even know?

Dr. Shade ([07:28](#)):

Yeah, so let's take just sort of generalist first and then talk about amalgams. Maybe we can, you know, say, well, this is a little bit more fish based. This is a little bit more amalgam based. So generally, like the top two things are anxiety and fatigue. So anxiety, and this comes from a lot of toxins, but mercury is really good about it, is their impact on the glutamate receptors in the brain. So in the brain you've got 80% of your neurotransmission is between the excitatory glutamate and the inhibitory GABA. Glutamate makes you up and on it and have memory. But with that comes fear and chronically grading fear as anxiety. GABA on the other hand, is cool and chill and it's your zen neurotransmitter. And in your autonomic nervous system, which these, that's your central, but they directly impact your autonomic, your sort of background nervous system that's controlling, you know, where you put resources, what you prioritize.

Dr. Shade ([08:30](#)):

So the glutamate goes with your sympathetic autonomic, which is your fight or flight. So too much glutamate activity. And your fight or flight, not enough. And your little dull. GABA on the other hand is the parasympathetic side. It's influencing parasympathetic rest, digest, repair, regenerate, detoxify, all the regenerative side. So the, the mercury's making you sort of like jacked up and stuck on that side. Now you're not repairing at all. And so you're starting to fatigue, you're, you're winding, you're wired, but tired. But there's a couple other reasons You're fatigued, right? At a cellular level is mercury's direct ability to impact the mitochondria. Mitochondria are the power plants inside every cell. They're what make the energy. And they're very delicate inside. They have a lot of oxidative stress going on cuz they're where respiration happens. So you're feeding in oxygen and you're burning the wood in there.

Dr. Shade ([09:28](#)):

And so the carbon substrates are coming in, the oxygen's coming in, and you have this big antioxidant system to keep that under control. And the mercury comes in and it knocks out parts of that antioxidant system. So the mitochondria burn up and so they're not making energy anymore. In fact they're making free radicals. But then mercury hits a couple other energy generating mechanisms in the thyroid, it's blocking T4 to T3 conversion, which is the thyroid's releasing T4 and then peripherally turning it to T3, which is the go. It's the gasoline switch for metabolism. And that ability to, to move over is blocked by mercury, also by cadmium and arsenic in some other environmental toxins. So all these different ways, it's bringing it down and then by bringing all that down and you're trying to keep going, you burn out your adrenals. So that brain and adrenal thing starts to happen.

Dr. Shade ([10:24](#)):

And that happens from all forms of mercury. Now inorganic mercury versus methyl. So methyl mercury is absorbed like an amino acid. Your body thinks that it's Methionine. And so it's absorbed through the L-neutral amino acid transporters in the GI tract. 95% absorption, whoosh right in, right across the blood brain barrier because you think it's methionine, you're growing a kid, whoa, throw more methionine.

And so the kids got like 70% more mercury than you do. I mean it's, it's, you know, it's a big mess with that. It's a little less toxic at a cellular level. I mean it's definitely less toxic than inorganic, but it goes everywhere. It also comes out pretty easily. But when it goes through the liver into the bile, it gets reabsorbed. So you need some way to shunt it off. Now, inorganic mercury that where we're, we're talking a little bit more intracellularly for methyl mercury.

Dr. Shade ([11:19](#)):

Inorganic mercury is moving more extracellularly now. First it comes in as a vapor off your amalgams. 80% absorption into your lungs goes everywhere, can go right across the blood-brain barrier. But it doesn't last long like that. And then it oxidizes, when it runs into catalyst antioxidant enzyme, it oxidizes or rusts into inorganic mercury. So like at the blood-brain barrier, it doesn't move in as inorganic, but it does as elemental. And if it oxidizes up there, it's really slow and hard to get out. But then, then when it's inorganic and it's moving around, it's sitting in the extracellular compartments a lot. So you tend to get more joint issues from it, skin issues, rashes, all the things that we think of as extracellular problems. So that's the slight difference. And then it's going out through the kidneys and the liver, whereas methyl mercury is only going out through the liver.

Dr. Shade ([12:16](#)):

So hence why inorganic mercury has more of a nephrotoxic action. And then that nephrotoxic action, in fact every aspect of the toxicity is synergistically increased by presence of endotoxin. Endotoxin we call an inflammagen. It generates inflammation, it's parts of bacteria, not all bacteria, just parts of their cell membranes that your immune system recognizes and thinks are whole bacteria and they think it's an infection and they wind up inflammation. And where do you get these old parts biggest sources? Leaky gut, leaky GI tract inflammation in your GI tract. Parts of that are going into solution. But then there's a couple other ones that we don't think about as much. Chronic UTIs are very acute spikes in endotoxin. And the big one we miss is periodontal inflammation. So this is part of that oral systemic, obviously having amalgams is a big oral systemic problem. You know, you, you'll talk with dentists about, you know, root canals, cavitations, but just periodontal bacterial overgrowth in inflammation gets a lot of this in.

Dr. Shade ([13:28](#)):

And there's great correlations between heart disease and depression and periodontitis. And then the last source is overgrowth in the nasal cavities. So keeping nasal oral hygiene and GI health is huge towards stopping the toxicity of not just mercury, cadmium, arsenic lead, but everything, because that inflammation turns down detox. It's one of the big takeaways people need is inflammation and detox are antithetical. As inflammation goes up, detox goes down. And that's because when you want inflammation to kill bacteria or some infection, you use prooxidants to do it. You make hydrogen peroxide, hypochlorous oxide superoxide. And so you turn down your antioxidant action, but your antioxidant action is your detox action. And so those two go together. So methyl, you know, mercury toxicity, brain energy, methyl mercury, more fluid, more intracellular, inorganic, mercury, more extracellular kidney joints, skin and all of them bad.

Caspar ([14:38](#)):

Yeah. There, there are a lot of different ways to test for mercury. And I know you have a, you started many years ago and created a patented sort of diagnostic process. Can you go a little bit into that and

perhaps how, why that's different and why people should really understand, you know, what, what they have within them as far as mercury and toxicity goes?

Dr. Shade ([15:00](#)):

Yeah, we developed something called the Mercury Tritest. Where we're looking at blood, hair and urine and using this mercury speciation technology that I developed in grad school for separating different forms so we can look at inorganic versus methyl mercury. And that was really important because before we could separate that and we also look at very, very low levels. And before we could do that, people use something called a challenge test. And I'll talk about that then I'll get back to the tri test. Yeah, the challenge test you took these chelators, D M S A D M P S, maybe E D T A, if you're looking at lead, grabbed a bunch of mercury that was bound to circulating proteins, a little bit of extracellular stuff and dumped it all through the kidneys. And you get this big spike in mercury. And there was all this mythology around it.

Dr. Shade ([15:54](#)):

The mythology stated that mercury metals never move out of the body unless they're provoked and pushed out with these chelators. And this is showing you your body burden or your intracellular burden, except none of these things actually went into the cell. They were just taking what was already there and already coming out through the urine and already in the blood, but the levels were low and we couldn't measure them very well. And it just had this flush through the kidneys and you say, oh, now we see it. So if there's a horse race of urinary lead excretion say, or urinary mercury, and there's four of us here and there's the high, medium and low, and we can measure low enough to see that when you get the chelator, now there's a 10 to a hundred full bump, but it's still high, medium, low. And if somebody's kidneys are really damaged, then you won't even see the bump.

Dr. Shade ([16:44](#)):

And if they're really sick and they're chronically ill and you start stirring up this mercury and you take it from one place, dump it in another, you get a lot of symptomatic problems from that. In fact, that did all kinds of damage to me and it actually gave me the opportunity to create a true holistic system that uses the body's own methods. And that's what fixed me. But that's what they were doing. And then I came along and I'm like, look man, I got technology. I can read really, really low. I'm not gonna have non-detect because they would say there's no mercury in the urine unless you chelate it. Well that's not true. You just don't have good equipment. And so we were able to measure low, we were able to separate the two forms. So you've got methyl mercury and inorganic mercury in the blood.

Dr. Shade ([17:29](#)):

And if you don't separate those, even if you have an equal body burden of the two methyl mercury is overrepresented in the blood compared to inorganic, you might have 10-15 fold higher methyl mercury in the blood than inorganic even with the same total body burden. So when they used to just do total mercury in the blood, all you were looking at is how much fish somebody ate. And you go to Quest or LabCorp, they got these detection limits that were pretty high, like one part per billion. But for inorganic mercury, if they don't eat any fish at all, but they got a lot of amalgams and they have a lot of mercury in their blood, you won't even see it. And then, you know, the occupational, you know, toxicologist would say, well, you'll see it in the urine now if your kidneys are working well, you will, but if your kidneys aren't working well you won't see it there either.

Dr. Shade ([18:21](#)):

So they had all these non, you know, these false negatives. So when we did it, we separated and here's this big methyl mercury and this small inorganic mercury. And then we made reference ranges for each of those. And just as a, a representative difference, the 95th percentile for methyl mercury was about seven and a half or eight. And the 95th percentile for inorganic mercury was about five. And so there are very, very, very different levels in there. And so once we could separate those, we could say, oh my god, you have a lot of methyl of inorganic mercury and this methyl mercury's not as bad. And or you know, you're creating a lot of inorganic from methyl. We could talk about that disposition. Then we, we would use hair and urine as excretion indices. So inorganic mercury urine is only inorganic mercury. And so we could compare the blood inorganic mercury to the urine inorganic mercury and see how well the kidneys were offloading that inorganic mercury.

Dr. Shade ([19:28](#)):

And if you had high inorganic in the blood and low in the urine, that's called retention toxicity. Hal Huggins saw that in 1973. Talked about it in his book, it's all in your head, but he couldn't measure it. So when I was showing him these, he's like, there we go. He was so happy to see it. Then for methyl mercury, you have methyl mercury in the blood versus methyl mercury in the hair. Now ideally it would be in the bile, but we're not gonna stick a needle into your liver and take a bile you know, bile biopsy and hair is a good surrogate for that movement out. It's a mobilization of mercury from the blood into tissues. And so we would do a, a blood hair ratio. So you have the forms you're exposed to how they're distributing between the two forms and how they're excreting. And that was called the Mercury Tri test from Quicksilver Scientific.

Caspar ([20:21](#)):

Yeah. It, it really is, you know, a comprehensive look. And I've always said this, you know, labs are a wonderful thing. Functional testing and analysis, a wonderful thing. Even a provocation test like you mentioned can be something that gives some insight. Yeah. But it's, it's just a sliver of insight that you need to combine with the rest of the puzzle, you know, pieces. Totally. And too many times, you know, we rest on just that one piece and then go in and.

Dr. Shade ([20:43](#)):

You treat the number and you don't treat the person because Absolutely. Then at a certain number, somebody's gonna be fine and somebody's gonna be a mess.

Caspar ([20:50](#)):

And if you only have that one number, let's say, and you go in with a limited you know, understanding of things and just do the chelation alone and put someone on that D M P S. Like you said, more likely than not, you're probably gonna do more harm than good. Totally. And, and can you go into that for someone listening that's saying, well, I don't get it. I have high levels of mercury, I've, I've, you know, done the trite or other things. I know this and I was told I should just keate cuz that gets it outta my system. Can you go into the importance of really getting the organs of elimination right. And maybe even go through some of the products that can do that from Quicksilver.

Dr. Shade ([21:28](#)):

Yeah. So you got a high level in the body and you want to get it down, but why do you have a high level? You have a high level, it's combination of exposure and low excretion. Low detoxification. And how does

detoxification work? Now, if we look at mercury coming out, you've got the cell, you've got compartments, you've got the cell going into the blood and then excreting out and it's excreting out through the liver to the bile. It's a really big one. We're gonna hit this multiple times cuz the transport of the liver from, of toxins from the liver to the GI goes through bile transporters. So if you're not moving bile, you're not moving toxins. So you've got cell blood, bile, gi or cell blood kidneys into the urine. And in the kidneys it's the proximal tubules and they're active transporters. We think of glomerular filtration, filtration rates creatinine clearance rates.

Dr. Shade ([22:32](#)):

But the kidney, you've got the glomerulus moves a crude filtrate down to the proximal tubules where you remove the water, the amino acids, the peptides, couple other things and you dump the toxins in. Same transporters in the kidney that are in the liver. So, and then I said blood, blood is really blood and lymph. So the cell dumps into the extracellular matrix which moves into the lymph that then moves into the blood. So you've got toxins moving through lymph, moving through blood from blood, they get excreted out into the organs of elimination. Some of the lymphatic stuff goes direct into the GI. So you gotta take care of all of that. And you think it's just the metal is doing things wrong. But if that's not all working, that means one at a cellular level, you probably got a poor detoxification system. That's poor glutathione system.

Dr. Shade ([23:28](#)):

And there's a whole bunch of things. There's a toxin, there's a phase one, you've gotta create an ability to stick glutathione or another molecule onto it. And then that's called phase two, the sticking. And then the transport is the movement through all these doors. If you don't have that happening, then the cells are built up with toxins also. If that's not happening, then the glutathione system is low and the glutathione system is not feeding the immune system cuz it's not just detox feeds. The immune system means your immune system is low, it's feeding tase. And so telomerase is low. When telomerase is low, you're aging at a rapid rate. You're gonna have mitochondrial dysfunction, you're gonna have senescent cells, senescent cells of cells that don't grow but spread inflammation. So at a cellular level you have all this decay happening. That's why part of why you're accumulating everything then at this transport and this drainage level, this ability to move bile out and bring the toxins out with it.

Dr. Shade ([24:27](#)):

If that's low, you have a big systemic accumulation, not just of mercury, but of all the sup toxins you're exposed to and you're not feeding bile into your upper gi. And bile in your upper GI is bringing glutathione for detoxification rec reactions in your upper GI and it's washing away. Bile is a detergent and it's there to emulsify fats from your diet. And in doing so, it's also washing away bacteria from your upper gi. We'll talk about probiotics and stuff, but those are lower GI things. The upper GI is a chemical reactor and when the bacteria get into the upper Gi, that's called small intestinal bacterial overgrowth and bile is washing that away. So bile is doing all these things, bringing toxins out, digesting food and detoxifying and washing away bacteria. And so you don't have that going. And then in the kidneys, the kidneys are moving all of these toxins out.

Dr. Shade ([25:24](#)):

The kidneys are controlling sodium, potassium, they're controlling blood pressure. And if they're not working well, you have accumulation of all these toxins, more water soluble toxins for the kidney, fat soluble for the liver. And all that stuff is building up. So opening all that up isn't just take the toxin out,



it's repairing things at a cellular level. It's repairing if actually when you go into these, the compounds you take for that, they actually repair the mitochondria. They repair the cellular space, they take you out of senescence or get rid of senescent cells. They open up the transporters into the lymph and blood. We're gonna move lymph and blood, we're gonna drain kidney, we're gonna drain liver, we're gonna fix all these systems. And when you do it naturally, all that comes with it. Versus alright, all this stuff's blocked in the middle is all these metals, and I'm gonna throw the key later in there. You haven't done anything to help up here. And you then moving metals from places where they were stuck and maybe a little safer and now maybe more get into the mitochondria more, get across the blood-brain barrier, more land into a, a damaged liver, more land into a damaged kidney and stuff doesn't come out and you're just hurting all of this already impaired or broken system.

Caspar ([26:45](#)):

Yeah, it's really like a reductionist approach when you hear about doctors that just hear heavy metal chelation, heavy metal chelation.

Dr. Shade ([26:52](#)):

It's a black box approach, you're a black box, there's metal in there, chelator in metal out. Why didn't it work?

Caspar ([26:58](#)):

Right. Or why did it even make it worse? And then you feel something else is there.

Dr. Shade ([27:02](#)):

Why, why are they sicker?

Caspar ([27:04](#)):

Yeah, yeah. You know, you, you have a great system. The the push catch system for detox. Can you go into that and how that works? Cuz it is quite different than most supplements that you just take and supposedly act in the background.

Dr. Shade ([27:18](#)):

Totally. So we have this core push catch and then things we'd plug in around it. And you know, first I started, oh glutathione at the cell level. You know this I m D at the GI level, but what's in the middle and what's in the middle is the liver. So what we need to do is couple the release of toxins to the flow of bile into the GI and then you gotta grab 'em all there. Remember I said a lot of reabsorbed, so many are reabsorbed. So push catch at its red, it's, it's minimalist core is Liver Sauce and binder in Liver Sauce. There's a couple of programs. The bigger or the first program is the bio flow program. And these are traditional bidders. I mean, you know, you, you come from German heritage and Austrian heritage and that they use bidders all the time.

Dr. Shade ([28:13](#)):

Traditional bitter compounds, even like the Angus stir you put in your old fashion or Manhattan. That goes back to gentian you know dandelion root, various different, various different bitter herbs that stimulate the bitter receptors in the mouth, in the stomach, in the pancreas, in the liver and move the bile. So that's moving the bile cuz remember the transporters for metals are also bile transporters. So



when there's any cholestasis, there's toxo stasis. So first program is bio flow. Second program, it has some mast cell stabilization because if we, the push is not just outta the liver, it's from cell to blood to liver. And when the toxins move out into the blood, they can activate the mast cells. You can have allergic reactions to them and that winds up inflammation. Remember inflammation blocks detox. So quercetin, luteolin, stabilize the mast cells DIM people think of it only for estrogen, but it shifts your immune system from this hyperreactive toxic side.

Dr. Shade ([29:23](#)):

It's called TH 17 polarity moves over to TH regulatory where you're more you're more tolerant. It's immuno tolerant. So you gotta turn down that reactive capacity. So that program's in there. And then you have NRF two, which is turning up cellular dumping of toxins. NRF2, it's the Arlapoic acid with help from quercetin, luteolin and DIM. And there's milk thistle in there, which is stimulating a whole number of different enzymes in the liver. So Liver Sauce is going blood sorry, cell to blood activate the liver movement, coupling that bile flow, dumping it into the gi. And these are all in this nanoparticle format. Nano emulsion and nano liposome that peak in the blood between 15 and 25 minutes. So you get all this coordinated effort, we call it bio synchronous activation of all these things and dumps all that down in about 30 minutes.

Dr. Shade ([30:25](#)):

That's down in the GI tract. Now you gotta catch it, use Ultra Binder. Come in there, you've got charcoals clays, zeolites, IMD our metal binder, kaizen, you've got a acacia gum and aloe for the GI lining. And you bind it all up, you've activated, moved bound, and then these things metabolize out of the body. It's a nice neat little thing. Then you add on glutathione for those cellular reactions, add on kidney care to open up the kidneys, maybe membrane men to Phosphatidyl Choline source for, for helping bile flow and rebuilding all the membranes and everything comes out really fast and really without symptom, without all the symptoms that you have for others. So like a two to three month detox is what we used to take us a year, maybe two years to do.

Caspar ([31:15](#)):

Yeah, no, it's a, it's amazing how comprehensive you could look at the detoxification process and all the ingredients. And a lot of this goes back to things we knew for a very long time. The bitters, as you mentioned, things from Paracelsus and even, you know, before that that understood these, these nature provides that. And that's all we're doing. We're tapping into it, making it truly bioavailable and stimulating those things that.

Dr. Shade ([31:39](#)):

And you know what Angostura bidders was? It was developed by a surgeon in Army and he had they were down in the Caribbean and they needed one thing to keep everybody healthy. And that's what it was.

Caspar ([31:51](#)):

There you go. I mean, super important something so few people use these days. Yeah. You know something I've heard you use in, in a core principle of a lot of the bioavailability and the supplements you use is the liposomal format. Yeah. And it's all the rage right now, let's be honest. I was actually down in Miami last week and met with some nutraceutical people that were, you know, developing new stuff and I asked them how they felt about, you know, liposomal formulas in general. They're like, well, you

know what, what is, what, what is liposomal to you? Cuz to every company that comes in here, it means something else. And there's a truly liposome, now you just slap your, you know, that word on any supplement and kind of sell it that way. But ta talk about

Dr. Shade ([32:34](#)):

There's so much marketing out htere.

Caspar ([32:34](#)):

Joke out there. I know. It really is. And that's the thing. There's so much marketing, there's so much confusion in the marketplace too, as to I get it. They're like, Hey, is this product good? It's very hard to tell just off a picture of a product. Right? Yeah. And then you have no information on what it truly means, or or why it would be or the process that it took to get there.

Dr. Shade ([32:55](#)):

Yeah. And you know, unfortunately a lot of people just take like a baker's cetin. Let's just get some Cargill cetin and put it in a blender and what does it do with water? You get this big milky, cloudy thing and they say, well, that's a liposome. They don't know what the hell it is. And they chuck the glutathione or the vitamin C in there with it, and they call it that. Now, in those, those, if they were liposomes, they would be very large ones with slow absorption and you can't see if you have instability in there because they're all cloudy. Now when those particles get down below a hundred nanometers, they go clear because they're smaller than wavelengths of light. And so now if there's anything not dissolved in there, you see it fall to the bottom, you'll see anything not perfect in the in the membrane of the liposome or the nano emulsion rise to the top, that's called creaming.

Dr. Shade ([33:50](#)):

And you know, and you'll see all these instability. So when they're transparent, you know, it's a perfect solution. You don't know what size it is, but none of these guys do. We, to really characterize these products, you gotta be able to do some of the analysis on them. Dynamic light scattering, we have three of 'em in, none of these companies have a single one. We have one in R&D, we have one in manufacturing and we have one that's a mobile one. And if we ever have partners, we move it over there. I bring it to shows sometimes and shame people. And you know what we do in r and d? We develop, we find the particle size and this uses lasers and backs scattering to see what the particle size is. We find the most stable particle size for the different ones that we're doing.

Dr. Shade ([34:37](#)):

And then we make that specification for manufacturing. Every batch that comes out has to have that particle size, you know, give or take a little bit. And the particle size is intimately connected to absorption rate. So we're gonna get the same absorption with every single batch. Then we're also characterizing with electron microscopy, so we know what those particles look like. And those have as opposed to a correlative measure of size, they have an absolute measure of size. They look, got a little nano rulers in there. And so you can say, all right, did this all work out? Right? And so, yeah, okay. It all does. And then we do the pharmacokinetic studies, the absorption studies to see what's going on. We know that, for instance, our C B D, you peak in 15 to 25 minutes, depending on the person versus two hours for a capsule.

Dr. Shade ([35:28](#)):

We know we got six fold more into the blood than we, than we did with the other. Quercetin 24, 25 fold more into the blood, peaking in 20 minutes. We know how all this stuff works. Everybody else is just, oh, it's liposomal a hundred percent absorption, nothing's a hundred percent absorption. You know, stop with this, you know? And so fortunately we're miles ahead of everybody. Only groups that put out anything decent in the last 10 years came outta cannabis because there was so much money that a bunch of PhDs went in there and there was one or two products that came that were good. But most of those disappeared because the industry's disappearing. But the nutraceutical level, it's just really bad unless we're private labeling for them.

Caspar ([36:13](#)):

Yeah, no, it's, it's a shame what you see going on these days as far as, again, claims and, and this sort of marketing hype that goes beyond it. Yeah. But it really is in the process as you know, quality determines results. Yeah. That's in health and medicine. That's it. So you gotta understand where you're sourcing as well as the process if you don't have those piece of information. I really don't care about the claims too much of a company.. You gotta be a little bit transparent in that. And I know Quick Server definitely is. Yeah. Oh

Dr. Shade ([36:43](#)):

Yeah. We have so much testing, so much characterization. We're just obsessive about quality. I just freaking cringe if anything isn't perfect.

Caspar ([36:52](#)):

Yeah. And it makes sense. These are things you're putting into the body. They have to be of the utmost quality and unfortunately as humans, we put a lot of crap in our body and that's the need for detoxification.

Dr. Shade ([37:04](#)):

Yeah. They're, and you know, and frankly, you know, it's my whole life's work and it's like my pride in that and it's, you know, my signature on it and if it's not doing what I, you know, intended it and said it would do, you know, that's freaking killed me.

Caspar ([37:21](#)):

Yeah. And that, that's how it should be in medicine. Yeah. And and in health for sure.

Dr. Shade ([37:26](#)):

Yeah. Yeah. In health for sure. People are giving, you know, I work in autism all the time. I know your dad did a lot, your clinic does a lot. And you're dealing with these kids and these parents and you know, you have to bring them the best of the best of the best.

Caspar ([37:41](#)):

And that's why people need to understand, to get the best, you gotta pay for the best. You know, that's, people get that all the time with cars. Right. Premium fuel.

Caspar ([37:49](#)):

And they're nice European sports cars.

Dr. Shade (37:51):

Yeah. They'll do that and then they go to Walmart for their supplements. I mean, you know, we're known as a premium and it's like, well you're, there's much more expensive than this. Right. There's a great reason for that. But you know, you look at our P&L and our margins and stuff, it's like when money people come in, they at me a lot. They're like, you gotta make more. I'm like, I can't charge anymore and I can't use a cheaper ingredient. Right. You know, it's like this is what we got. We just gotta sell more.

Caspar (38:18):

Are you worried about where the industry is going with that when you have Nestle, Pfizer, others buying up these, you know, manufacturers of supplements?

Dr. Shade (38:28):

Yeah. I just don't know if they're gonna, you know, the equity guys cheapen things. Yeah. And you know, the big companies look for ways to streamline and make cheaper, but I don't see them lowering prices or lowering quality. So Nestle brought, bought atrium and Pure Works for Pur is part of Atrium. Yep. And we make products for Pure, they are a pain in the ass on quality pain in the ass. It's like there is nobody cheapening anything over there and they're not about price. So I don't see that as a problem. Equity companies are coming in, coming in and buying some of these groups and all they care about is the bottom line. Yeah. That's where you're gonna see erosion cuz they're gonna do that, try to make it pro profit more profitable and then sell it to Nestle. So I think it's at the equity, private equity side where you see the cheapening.

Caspar (39:28):

Yeah. I mean I, I saw an article where a lot of private equity and VCs are going into healthcare in general, mostly clear.

Dr. Shade (39:35):

Are, they love

Caspar (39:36):

It, they love it but, but they love lowering the quality and maximizing profits even at the expense of people getting unhealthy. That, or unhealthy I should say. Cause they're already unhealthy.

Dr. Shade (39:47):

And they're different ones. We don't have to demonize all of 'em. I've talked to a lot of 'em over the years and some guys are good and some guys, you know, they don't give a shit.

Caspar (39:55):

Absolutely. You mentioned you were just A4M you were there speaking. Yeah. And you know, talked about longevity and detoxification cuz a lot of people think, okay, you need to detox when you're chronically ill. You need to detox when you have tons of symptoms and already Yeah. But the truth is we are always detoxing all the time. Our organs are doing that. And some we do need support living in this toxic world where everything around us is basically a toxin. Can you go into how that, you know, directly impacts longevity and this idea of anti-aging through detoxification?

Dr. Shade ([40:29](#)):

Yeah, no, it, it's huge. When I used to go to a firm you know, like 10 years ago I started going and I, I, you know, I had this complex, I was like in the back in these little booths and I'm like, I'm just the guy who takes out the trash and up in the front there's stem cells and hormones and all this sexy stuff. Fast forward, you know, all the research is coming out now. They call the toxins gerontogens things that accelerate aging. There's a good there's good paper on the coin flip theory of aging where when you age, your ability to detox is going down, yet the toxins are increasing the rate at which you age. We just did a 40 person three month study where we drove detox and, and you you'll see detox dovetails right into metabolism and cardiometabolic health.

Dr. Shade ([41:20](#)):

And that is right into health and it dovetails right into sirtuins. And these things like senescence and telomeres, we just hit these things for three months. We are able to reverse biological age, you know, those epigenetic ages. The horvath clock, we took a year off that and dramatically slowed down the rate of aging. We did much better than caloric restriction in a two-year study. That was by offloading these toxins at the same time upgrading the activity of the detox system and the mitochondria and all these things come with it. And so the toxins, so we talk about sirtuins and sirtuins are putting you into these higher grade metabolic and regenerative programs where you're not accumulating weight, you're burning very effectively. This accumulation of weight is turning up inflammation. Inflammation is the road to decrepitude. And you know, things like senescent cells, the cells that don't grow anymore and just release more inflammation that gets other cells into senescence.

Dr. Shade ([42:26](#)):

All the wrinkling and all the wrinkles. Those are senescent cells that aren't making collagen and elastin anymore. Those are all, that process is driven by detox and that process drives down the detox system. And so you know it's, does the toxin shut that down and then propagate it? Or is it decaying and then allowing the toxins in either way. You have to keep hitting refresh on the detox system and that's hitting refresh on this longevity system. I mean it's just so profound how well those two tie together. And then we have these other aspects of intermittent fasting, carb restriction, water fasting. Those are huge in longevity. Right. What's the target they're hitting? It's a M PK and A M P K is your inner metabolic detox. It stops anabolism and turns up autophagy where you go in and you break down old decrepit cells, you break down old mitochondria, you take the good parts and reuse them and you shuttle out the old parts.

Dr. Shade ([43:36](#)):

You break down old accumulations of unfolded proteins. You get all this trash outta your system so that you can regenerate. So a M PK is clearing out sirtuins then are re regenerating. Well those are totally tied to detox, not just cuz you're taking toxic cells out, but NRF two is our trigger that turns up the cellular detox of all the environmental toxins. Well AM PK and NRF2 are totally tied together. When am PK is high, say your intermittent fasting carb restriction NRF two activation is a piece of cake. When am PK is low in your carb gorging, it's hard to even get NRF two up. So all these things come together. So if you can intermittent fast and lower your carb intake while you're detoxing the whole thing cleans up. So, so well, and then you're gonna bring, bring in some of these things like N a d promoters, like nicotinamide, mono nucleotide, nicotinamide, riboside.

Dr. Shade ([44:37](#)):

They're gonna help your sirtuin, but they're also gonna help your detox because detox is part of this antioxidant system, the glutathione. And it relies on not N A D but n a D sister, NADPH to keep re-reducing all the antioxidants. So all that stuff ties together and you can tie it all in that push catch system. We all, we very regularly have people add in the NAD precursors, especially when they're older. So all that is just one big continuum and that detox thing is probably the cornerstone of it. If you're gonna go into a toxic body and put peptides or hormones and stem cells in, you're gonna waste a lot of money.

Caspar ([45:18](#)):

Yeah. And speaking of diet, when you have people going through this detox using your product to push catch to glutathione on all of it, are you suggesting that most of those people go on intermittent fasting or what, what else beyond that, obviously you're saying carb should be down, but are you a fan more of an intermittent keto, you know, genic and you know, plain what is it?

Dr. Shade ([45:40](#)):

Yeah, yeah. In fact we do like we have this product AMPK charge that like pops you right in the ketosis you know, in the morning. And people do need a little carb. And especially like if you're sick and your adrenals are down, you need more carb cuz you're just having a hard time Yeah. Being in ketosis and burning up that stuff. And so according to fatigue and stuff, you might have to have more or less carb. But if you can do some in the morning, you have AMPK charge flipping you into this intermittent keto, that's the best protein you're gonna need some of that. But the more protein, the more you're blocking AMPK. So this sort of paleo de keto, intermittent, as much carb as you need to keep it rolling. The little, the less the better. The more you can do intermittent fasting.

Dr. Shade ([46:28](#)):

And the older you are, the more everybody can intermittent fast younger, especially women, they have a little bit of a harder time with that. But if you can keep the carbs down in the middle of the day and do more at night, vegetables are great. They're binders, all the, all the fibers in there are binding and moving out. I will say this though, everybody thinks that, you know, a lot of crucifers are really high detox. When people are really symptomatic. This is more, less in the aging side and more in the chronic disease. And they've got a lot of brain fog and down lot pull the cruciferes out, put in some selenium. They usually have CBS issues, cysta beta thioine syntase and suox sulfate oxidase issues. And those sulfur groups can be very irritating. And often we pull all the crucifer out, all that kale and cabbage and broccoli and pull that out. We may pull out all the alliums until they're less symptomatic and then you can slowly bring those things back in. So that's my caveat there on the vegetable side.

Caspar ([47:38](#)):

Yeah. Really good advice there. And as far as actions one could take, you know, is it the, are you a fan of the saunas sweating exercise? Right? That that's part of your detox..

Dr. Shade ([47:48](#)):

You got push catch. Yep. Any therapeutic in the middle? Pushes on a catch.

Caspar ([47:53](#)):

Hmm.

Dr. Shade ([47:53](#)):

Push foot bath, catch foot baths. The good ones like I am cleanse. Yeah. You know, there's, I know that they get all muddy in there, but that's the electrodes, the toxins aren't in there. The toxins, it's a big autonomic release and I've measured blood metals before and after foot baths a couple weeks in the row. And the same people, they're released out of the tissues into the circulating fluids, blood and lymph. And then you clear those out and so they're good for helping you offload tissue burden and stuff. So push, sonic, catch, push, you can work out, try to keep it chill. Don't like hyper workout because that'll put you in sympathetic. But like, you know, walking light, jogging that kind of stuff. In between all those therapies you know, massage, push, massage catch, all those things are moving toxins. And you just put 'em right in between your therapies.

Caspar ([48:50](#)):

You got a lot of products now with Quicksilver, it seems like you've really expanded. Is there anything on the horizon that you're truly excited about? Even like technology or delivery bioavailability wise? Are you just gonna keep trying to find, you know, ingredients that are synergistic within the, the kind of set systems you have?

Dr. Shade ([49:09](#)):

Yeah, we, we did, we did a lot and really built that out getting that the kidney care and the performance cardio, those are really necessary additions. And then we did a whole hormone line and that was really spectacular and it was mostly a female hormone line. But now we have a complete bioidentical hormone replacement for women. And now let's just quickly tie that back into detox. Cuz women miss this. A lot of them, you're coming into perimenopause, menopause, all of a sudden you're much more toxic, symptomatic. These amalgams you have the, the the anxiety and the fatigue. You're wondering what's going on as your hormones drop, especially progesterone. Progesterone, as you're going through para menopause, you go into a relative excess of estrogen over progesterone. Progesterone stimulates liver flow and activates GABA receptors where estrogen blocks liver flow and activates the glutamate receptors.

Dr. Shade ([50:08](#)):

That's why estrogen dominance makes you irritable, bitchy. That's estrogen. So hormones are a huge thing. And the progesterone is also a co-factor. Or it's main driver of PXR. We, we talked about NRF tubing and up regulator for cellular detox. PXR, the prena X receptor uses pregnenolone and progesterone and is a co activator, a nuclear transcription factor with NRF2. So you need all these things to drive all of that even D H E A and testosterone and estrogen in the brain is protective. So the hormones are a really important thing as far as what we got going in the next, you know, the next year or two we did a lot of development. We'll probably redo our C B D line. I'm gonna extend some of our glutathione line and use some of the other forms and activators of glutathione.

Dr. Shade ([51:03](#)):

But we've done a lot of work to get where we are and we're really gonna a lot do a lot of work in the next year with the practitioners doing events all around the world or all, all around the country first. And we'll do some, some global things to really pull people in. You know, we've sort of saturated who knows about us, now we gotta go, we gotta bring more people into these protocol systems. Too many people use a one-off like, oh yeah, I use your glutathione. You know, it's like, no, no, we put the whole thing



together. So it's really gonna be a growth year for bringing a bigger family. We have a training system online, Quicksilver Scientific Institute and, and just grow that all out.

Caspar ([51:43](#)):

Yeah, that's great to hear because I mean, I I know being in the industry for so long and knowing you and the company that, that it truly is a quality one and people are just coming around the corner. Integrated medicine is, you know, obviously growing and functional medicine is part of that, but you know, the ability to find really, really high quality things out there is difficult. And, and you've been able to do a great job. Are you at all concerned about government intervention, FDA and supplements, things like they did with N A C and.

Dr. Shade ([52:16](#)):

Well, they just did that with NMN.

Caspar ([52:18](#)):

Yes, they did

Dr. Shade ([52:19](#)):

But that, that, that was,

Caspar ([52:21](#)):

I know

Dr. Shade ([52:21](#)):

That was bullshit and that's gonna be pulled out like N A C, but I think enough of us used it long enough that, that it was before the IND from this company. Although the F D A of course won't tell you when that was. Sure. so I think we're gonna live through that. There's always gotta be this pressure. There's always shots across the bow. In the years, I remember right when I came in, it was like, oh no honey penny, the guy is falling, you know, 15 years later. Yep. It's the same game. And I think that'll continue. The ground swell of support from people is so big. You look at CBD. CBD easily could have been shut down when GW Pharma got their drug approvals. It could have been shut down the way red yeast rice was, but it was already a multi-billion dollar industry. And there was no, there was no going back. And you know, pharma is always gonna be trying to shoot us down. God, they got so far during covid man, people's fear. They were just like, no, gimme the drugs, gimme the vaccines. I'm gonna die. Oh my God.

Dr. Shade ([53:27](#)):

I couldn't believe I was disgusted by the human response. But yeah, everybody's kind of like, you know, those vaccines didn't fucking work and no, my buddies are all dying of cardiovascular diseases and so there's blowback against that. Yep. They came close though. But that blowback is gonna keep us good for a long time.

Caspar ([53:45](#)):

Yeah, no, I totally agree. And I think there was a great silver lining, I speak about this with all guests in a sense of the pandemic itself, that people actually cared about their health for once. Oh, that was huge.

Huge, huge. They suddenly saw, Hey, I can't just manage this disease and being a huge risk factor, which you all always were, all

Dr. Shade ([54:01](#)):

All the cardio cardiometabolic diseases, which is like everybody got accustomed to having them. And it was like, no, you're all gonna die. You know, all of you have a huge risk factor. And everybody's like, all right, I'm getting outta the diabetes train here. And that was huge. It was a great silver lining there. And there was just, there was that threat from pharma to shut all this stuff down and now the blowback is opening it back up.

Caspar ([54:23](#)):

Yeah, no, it was, it was a kind of a good thing there that's happened. And people actually care about health. And that's a good thing for everyone, for society, for us, for, for, you know, the future as well because we need to turn around this whole ship of, you know, chronic disease that's impacting the majority and bring it back into minority.

Dr. Shade ([54:40](#)):

And, you know, the economic drain on our system's huge that that chronic disease represents. You know, we can turn that around. I mean, we're really on the cusp of being able to do amazing things with health and longevity. We just, you know, gotta get everybody's attention and gotta gotta turn the ship.

Caspar ([54:56](#)):

It's happening. It's happening. Dr. Shade, where can people learn more about you? Quicksilver Scientific, the products? Yeah.

Dr. Shade ([55:03](#)):

Quicksilver scientific.com. Go get yourself an account. You'll get our newsletter practitioners, get yourself an account, get into our Pro pages. We have 30 or 40 different webinars, tons of deep information. We have a great clinical team, a great education team to get you trained up on all of that stuff. If your practitioners, if you're consumer and your practitioners aren't using this, ask for them to use it. You'll find us on social, Instagram, I think dr. christopher shade.com and quicksilver scientific.com. Don't feel bad if I don't answer you. That's not actually me really looking at that. And we're definitely, you know, Quicksilver Scientific on Facebook, there's a whole YouTube page for Quick Silver Scientific and there's little snippets about every single product on there. Unfortunately, a lot of my longer lectures just go on YouTube in general and Google me, you know, all the ones that we did as quicksilver scientific are hidden away now. They're all for the practitioners, but there's a lot of great old material that other people have posted.

Caspar ([56:04](#)):

Amazing. You know, we love your products here at the clinic. I use 'em personally and.

Dr. Shade ([56:09](#)):

I'm just so glad to hear that. I haven't heard from you guys in so long since, you know, the FDA did their job with Soluna.

Caspar ([56:15](#)):

Yeah, yeah. They, they, they, they did the I know, showed up. That's, that's a relic now.

Dr. Shade ([56:20](#)):

It's totally a relic. I got like four bottles. I'm afraid to use em.

Caspar ([56:23](#)):

I know. And for those listening, we, we, our company mine used to distribute these German spheric medicines, biological medicines, until the FDA stepped in and did their thing and said, no, we don't want these their thing. Yeah. We don't want these things that have been around a hundred years in Germany helping people here in the US basically. That's what they, what's so good. Yeah. Well, Dr. Shade, I really appreciate this. This was great. I think it was, it was truly educational and on a really, really important topic of detoxification, so, oh yeah. Thank you so much for coming on.

Dr. Shade ([56:53](#)):

Hey thanks for being such a good interviewer and knowing everything about this. It was, it was. That was a great one.

Caspar ([56:58](#)):

Yeah. Appreciate it. Well, it certainly seems like a grim future if you look at what's going on out there with increasing rates of chronic illness, more and more environmental toxins and a fragile food supply. But there are dedicated innovators like Dr. Shade, that offer hope for millions of people struggling and looking to improve their health. Until next time, continue writing your own healing story.