Dr Mike T Nelson: [00:00:00] Hey, welcome back to the podcast. I'm your host, Dr. Mike T. Nelson. On this podcast, we talk about all things to increase your performance, add muscle, improve body composition, all without destroying your health within a flexible framework. And today, recording this from Mexico, we're down here working for a couple of weeks.

The program, we've got the great James LaValle, which is awesome. So fun talking with him. I follow James stuff for probably well over almost maybe 20 years, probably longer than that. I remember getting cracking the metabolic code a long time ago when it first came out. Recently picked up his book on blood work, which is amazing.

Highly recommend that. And all the wonderful stuff he's got going on. We got to chat about everything from liposomal delivery different types of supplements, what would be best. How you think about blood work, magnesium. I remember using a lot of his [00:01:00] information on magnesium years ago. And I forgot about it and started using it again.

And it's been extremely beneficial. So make sure to check out all the wonderful stuff he's got going on. Make sure to check out his supplement line, which I have used some of his products. I don't have any disclosures with them, but they've been super useful. And this show is brought to you by Tecton Ketone Esters.

I was out with those guys in Denver, Colorado last weekend, doing some filming, got to do some taste testing really cool stuff coming out from them. Not at liberty to say what it is yet, but hopefully we'll be able to give you all the lowdown once it's publicly available in a couple months. So look for some really cool stuff coming out from them.

In the meantime, you can check them out at their website down below. If you order, use the code Dr. Mike. I am a scientific advisor to them and an ambassador. So I do make some money there in terms of disclosures. Also check out our friends over at element. I brought [00:02:00] a crap ton of element down here to Mexico since it is pretty warm.

Dig at the kite board two days ago in light wind, which was great. So if you're looking for a tasty electrolyte supplement check them out. My favorite right now is still the raspberry. It's a tie between the raspberry and the grapefruit. And if you want more information for me check out my newsletter.

We'll have a link down below. You get daily updates and all the great stuff free information going out there. So without further ado, here is our epic chat with the one and only James LaValle.

Dr Mike T Nelson: dr. James LaValle. How are you, sir?

James LaValle: I'm doing great.

Dr Mike T Nelson: Thank you so much for being here. Yeah, I was first introduced to you through your Cracking the Metabolic Code book when it actually when it first came out and I remember Reading that and going how this is cool.

There's a lot of stuff about metabolism that I didn't learn In [00:03:00] school, but it was also very application based at the same time, which to me is under the harder for biochemistry area was a new revelation, like what kind of made you start down that path? Obviously your background is in a pharmacy.

James LaValle: Yeah, well, I was, I was training when I was 13 years old. So I was always had an interest, so the last now 50 years of working out and I was always fascinated by, well, how am I going to perform better? And that led me to understanding, well, your body works together as one organized system.

I was fortunate in my education and my mentors. To always approach things from a systems biology approach, cortisol doesn't act alone. Neither does testosterone, neither does insulin, neither does glucose. All of your body systems are working together and you're only as good as your weakest link.

And I was fortunate that I was seeing [00:04:00] three to 400 people a week at my institute in Ohio. And I just started seeing these patterns that were evolving. And that's what really got me thinking about writing the metabolic code book. It's getting people to understand more thoroughly. Why do you feel the way you feel and where is that going to take you if you don't do something about it?

And I've got my next edition of the metabolic code will be coming out this year.

Dr Mike T Nelson: I was going to make questions.

James LaValle: It's going deeper, and I got along with a book on human performance. I've got already, they're both written. I just got to go through final

edits on them. And it's really getting people understand that, things don't happen to your body by chance.

They happen because of a progressive march through metabolic inflammation, otherwise known in the literature is metaflammation, metabolic inflammation leads to inflammation. And and then the other thing that always crossed my mind because of my work with a lot of athletes was.

There is always this disconnect behind [00:05:00] biomechanics and biochemistry. And yet you really can't, you can't separate the two. You can have an injury that causes a lot of pain, and all that pain signaling is doing is changing your biochemistry, right? Your mood gets flat, you get depressed if the pain's long enough.

And the same thing, you could be eating the wrong foods, not sleeping well, triggering low grade inflammation. And now you're exercising, you can't figure out why you're getting sore. And so I think, my last, my first presentation I gave on metabolic code was 1997.

Dr Mike T Nelson: Oh, wow. That's wild.

James LaValle: Yeah.

And I, and all I've done is keep building on the model. The model is. Whole body metabolism. Everything is connected. The inputs are the stressors that affect your body. Then start to affect change and you either are in homeostasis, you're able to [00:06:00] recover, you're able to be anabolic, you're not in an inflammatory stance.

Or you're on, you're either there or you're on your way to it. So, that's, that was the whole thing about the metabolic code and what got me going.

Dr Mike T Nelson: Yeah, one experiment for, I'll say athletes who don't want to buy in, who are resistant to just pretty much everything else I've tried to do with them is, Okay, let's run your experiment.

Like you eat like a floating trashman fire. We're going to push training volume. We're going to make sure you're still training. You do you bro. You do your lifestyle. We're going to track resting heart rate, HRV. We could text some blood markers if we want. We're going to have some solid outcome metrics.

We're going to look at your performance, even how you feel. And the handful of people who have gone down that route after. Three to five weeks of all come back and said, Oh, I totally forgot how crappy I feel and how bad this really is. Maybe there's something to this nutrition stuff. I'm like, [00:07:00]

Speaker 4: nah, there is.

Yeah. Right.

Dr Mike T Nelson: And the flip side too I've had a few people now where, mechanically, we didn't do anything to them, really, per se. They did some training, but they were such a train wreck, we couldn't do a whole lot. But their diet was a complete disaster. And they didn't want to do any training, so I said, okay, that's fine.

Let's just focus on nutrition, you want to make changes there. And in a couple cases just doing nutrition only one person, his pain dropped by almost 80%. His movement got better. And he's just I can't believe this. This is so crazy. I'm like, but Like you said, it's all one system.

And when you're really pushing the extreme on one ends, you're going to have more effects to the other system than what you realize.

James LaValle: Oh, without a doubt. And, I've always tried to create practical approaches to it. What can you really do? What can you accomplish? You've got folks that today it's like, Hey, I've got to do my cold plunge.

I got to put my Faraday [00:08:00] glasses on. I gotta get out in the sun. I gotta. And, before you know it, you're stressed out over the fact that you're not getting all the things that you're supposed to do. And same thing with food, Oh my God, did you put aluminum foil around that baked potato before you baked it?

Right. All that. How dare

Dr Mike T Nelson: you?

James LaValle: Yes, exactly. It's terrible. And I, so I really, think that there's just this general ignorance still that pervades performant, what I call performance health, whether you're an athlete. Or you're an attorney, you don't want to be tired midday. You don't want to get gassed.

You don't want to be feeling like you're pushing a thought through Jell O at five o'clock. Right. And people get amazed that when they eat better, they feel better or when they start to move, they feel better. And I always chuckle at it. It's well, you can look at the long lived cultures and see what they do.

They move and they eat pretty good food and they end up living a pretty long time. And but we still look [00:09:00] for more of a magic bullet or, as better than I do been around enough strength coaches and we've got the similar friends and they're not in this camp, but we know a lot of folks that it's still just push hard, just work hard, right.

And the training load is very heavy. I think in teen athletes in particular, they're not little humans yet, especially the preteens that are training four hours a day, when they're 11 years old, it's like, can they play? Are they allowed to play? Right. And I think that's the other piece is people don't understand that it's.

It's all about how much you are able to recover as much as it is how hard you're able to train. So the recovery piece, the rest piece, the nutrition piece is really how you get the better performance and better health. And the other thing is especially when we look to, I know I lived through this because of my son [00:10:00] who was, two sport, all state athlete in the state of California.

And I'd watch other parents. My son had the nervous system to be that type of athlete, and I wouldn't let him overdo it, these other parents are taking their kids to a pre practice workout. And then there's a two hour workout. And it's it's gotta be fun. Don't forget there's a fun factor in this.

So it's interesting, really.

Dr Mike T Nelson: Yeah. And you see some of the nutrition logs from them and you're just like. Oh my, like you're trying to do all of this on the, what? You gotta be kidding me.

James LaValle: Chicken nuggets and pizza. Pizza's great. Cause it's all four, you should have it every day. Italian, I could almost argue it, but even I know that's not the case.

Yeah it's the whole aspect of. Eating for, eating to order to be able to perform better is, is a massive issue because what I [00:11:00] find is that, people are, whether it's a, a teen or an adult, they're just deficient in micronutrients, they don't have magnesium, they don't have potassium, a lot of them are iron deficient, their ferritin pools are low, and they're wondering why they're winded,

and they're wondering why they're getting leg cramps, and they're, they're wondering why You know, the big thing I always talk about is brain coherence, when you don't have your body optimized, you start getting your core body temperature going up.

Now, all of a sudden, your brain is trying to tell your muscles what to do and your muscles going, what? What do you want me to do again? No, I thought I was going to get to that puck. I thought I was going to catch that ball. I used to be able to do that. And a lot of that just stems from the fact that, they've created so much sympathetic dominance.

And so for the people listening, sympathetic dominance is you're always throwing out adrenaline and noradrenaline. You're always running from a white tiger and. People don't understand that the rest phase, even on a muscle contraction [00:12:00] is every bit as important as the contraction phase. And I, it's getting people to understand that, overtraining really isn't smart.

Dr Mike T Nelson: How do you get people out of that kind of sympathetic side? And we, I've had this chat with like our mutual friends, Kyle Dietz, many times I've had long chats with us about, Jim Snyder and both of them has said the professionals they've worked with who have the longest career, like they're all athletes who can be on when they need to be on and be off when they're off I remember Jim even saying you might get a few sympathetic monsters in the NHL for a few years, but they're not the people who are going to play for 10 years, and I think that's. Interesting. So how, one, do you agree with that? And then two, if so, how do you try to balance that? What are the things you look at for that?

James LaValle: Yeah, great question. One, I completely agree with it. I think that the first thing is you, so you've got this sympathetic and [00:13:00] parasympathetic nervous system.

Parasympathetic nervous system is anti inflammatory. Sympathetic is pro inflammatory, so if you stay in sympathetic tone, you're creating a pro inflammatory chemistry with reduced blood flow and microcapillary circulation, because when you're kicking out all that adrenaline and noradrenaline, the blood vessels are getting stiff and they're getting smaller.

So over time, under sustained stress, you develop more ischemia, you develop more lactate, you create more. Problems in the fascia, right? Because now you've got a lot of. I've seen that

Dr Mike T Nelson: if you do hands on work you'll feel it. Just, it feels like everything is just like wound tight, like everything.

James LaValle: Yeah. And hard.

Dr Mike T Nelson: Yes. Yeah

James LaValle: yeah. A lot of pain when I touch there. And so I think I totally agree that you have to learn how to turn off resting heart rate, two minute heart rate recovery, looking at your HRV, looking at recovery, people need to [00:14:00] do those things to say, well, am I ready for a hard day of work?

Tomorrow because if you're not ready for a hard day at work tomorrow and you push, Oh, I got to go get that white tiger juice again. I'm going to go get that sympathetic monster energy going. I'm going to hit that 1200 milligrams of caffeine during my day.

Dr Mike T Nelson: When you mentioned caffeine, bro, you got some issues.

James LaValle: Well, I had a guy, I had a pro athlete that drank. 32 mellow yellows a day. Whoa. Amazing. Right. And nobody can figure out why he was having stomach problems.

Dr Mike T Nelson: I have an idea.

James LaValle: No, nobody even bothered. We've scanned him. We've scoped them. We can't figure this out. We're going to send them over to the witch dive, or send them over to LaValle.

And the first thing I asked was, well, what do you eat?

Dr Mike T Nelson: Yeah.

James LaValle: What do you mean? Cause I said, didn't anybody ask you what you eat? Yeah. No. [00:15:00] No. Oh, okay. Yeah. I'm not a big deal. It's just what goes in your stomach. So the first step is. Yes, full agreement that you have to balance sympathetic and parasympathetic tone.

You need to be able to turn on the adrenaline switch when you're playing and you need to be able to turn that off when you're not. A lot of times if there's a depletion of neurotransmitters, especially things like gaba in serotonin it's

harder for people to dial down. One of the signs of that would be, Hey, they're not having a good night's sleep.

Their HRV starting to go down their, you notice their two minute recovery isn't good or they're accelerating their heart rate too fast when you take them up to load, right? So I think that's a, so, so the first thing is I work at creating balance and their neurochemistry by asking them about that.

Now you could look at serum amino acids. There's [00:16:00] folks that try to test for neurotransmitters in urine. And the problem is those neurotransmitters are coming from the kidney. from your brain. And so it's, I don't even look at that as well. If your kidney was the problem, I'd be saying, okay, but we're trying to make.

some kind of decision on your brain. And so a lot of times that ends up being almost empiric, but you can look at a cortisol level and you can tell whether, a, do they have a high morning cortisol, which is indicative of hyperarousal. The other thing is they could flatten their cortisol curve so that they no longer have a circadian rhythm to their cortisol.

Which means, up in the morning, down at noon, down more at 5 p. m. and then off, then down at bedtime. That's a problem for athletes playing night games because they got to get up, right? So you got to even work harder to countermeasure that. After the game, they got to go and go, okay, what am I going to do to come down from that rush?

And so the first thing is just assessing that, or you wired you're feeling over committed or you're feeling stressed [00:17:00] out, where are you? What are you feeling? Like, The next piece is I try to teach them simple things to do box breathing I'm not talking about wim hop where somebody might pass out.

i'm just talking about You mean you don't want to do a highly sympathetic breath technique when you're trying to down regulate? I don't know, but I don't think it's a good idea. Yeah. And it's interesting to me when you think about this. It's really interesting to me that I've got this watch on that's telling me when it's time to take a deep breath.

Right. 12 times a day. It gives you an a, a time to take a deep breath, . Well, aren't we supposed to be breathing deep all the time? And that's actually a feature. Of sympathetic dominance because the diaphragm gets stuck. You breathe more shallow and now you're not oxygenating your tissue. So I like

people doing box breathing, just the four seconds in hold four seconds, four seconds out.

Think of the stress of the [00:18:00] day you want to get rid of during that outbreath, hold it, do that three or four minutes. And then, be grateful at the end for something. I try to get them to do that two or three times a day, just because. I think in general, people just get caught up in traffic, emails, text messages, and all the things of living modern, right?

I'm not saying we got to go back to chopping our own wood, no electricity, I'm just saying we got a primitive nervous system in a modern world. And we have to work a little harder to countermeasure against that. I've played a little bit with a lot of the vagal tone stimulators and, some of the, the, Devices that try to help put people in a parasympathetic tone.

Dr Mike T Nelson: What have you found with those? I find mixed results.

James LaValle: I was just going to say, my issue is it's just not consistent. What I find is consistent is correcting for trace mineral disturbances. For example, an [00:19:00] acidotic urine will indicate an excess in hydrogen ions. Right? So you've got oxidative stress.

And that is typically due to a lack of magnesium and potassium, and magnesium is needed to help with that parasympathetic tone. And I find a lot of athletes are usually deficient in magnesium. And I check a red blood cell magnesium. I think it's a lot more accurate

Dr Mike T Nelson: don't seem to move much unless you're really messed is what I've seen.

Exactly. Do you find the red blood cell one is much better?

James LaValle: Red blood cell is really good. The serum mag, you got to realize, you're going to melt your bone down. Yeah. You're going to steal from somewhere else. Yeah. You're just melting that bone down, waiting for a stress fracture when you're relying on a serum mag, because you're going to protect that serum at all costs because pH is so important on blood, right?

Whereas with a red blood cell MAG, you're getting more of that tissue level. And so I [00:20:00] think, MAG is so important. So whether it's doing an Epsom salt bath and taking magnesium, I usually recommend seven and a half

to 10 milligrams per kilogram body weight on athletes mainly because I find that, they're highly depleted in tissues and I can't tell you.

Back in the old Poliquin days, if you remember, Charles Poliquin, I remember when I started teaching there and took that over for a bit, I started teaching the dosing of magnesium and I had so many performance coaches saying to me, I can't believe the difference that makes and it's, well, it is an essential nutrient.

It's involved in making ATP, it's involved in glucose regulation, and it's involved. And vasodilation and proper vascular pliability. So it's important. And that's just a couple of the things that it does. And, so I think that's a key area, like getting those minerals balanced out really helps with the parasympathetic tone, doing the breathing helps with parasympathetic tone, [00:21:00] gut health.

Look, probiotics, it's really important because we know the more an athlete trains. The more they get this biotic flora and they start to kill flora off. Because the blood flow is reduced to the gut and then that those bacteria break down, they release lipopolysaccharide that crosses the blood brain barrier that triggers neuroinflammation and triggers sympathetic tone.

So I'm a big fan. All I got to do is look at runners diarrhea, right? Or talk to a lot of athletes, right? Long

Dr Mike T Nelson: distance endurance athletes.

James LaValle: Yeah, exactly. And then, it's interesting when I talk to a lot of strength coaches, they'll tell me as much as 20 to 25 percent of their athletes that they're managing on the professional level complain to some kind of GI distress.

Dr Mike T Nelson: Yeah, it's not surprising.

James LaValle: Yeah. And a lot of that's because You're not doing anything [00:22:00] for that microbiome. So when people hear microbiome, they go, well, I poop normally. I'm pooping good. And it's okay but there's a lot more to your gut than if you're pooping or not. Right. And are you having diarrhea or constipation?

The fact is you have a nervous system called the enteric nervous system that connects the gut to the brain. And it turns out the gut and the brain are signaling each other. And so I'm big on probiotics. I like DNA verified probiotics. I like probiotics that are guaranteed the date of expiration.

And I like probiotics. But when you got a bunch of them in a bottle together, so it's, oh, we got a list of 30 probiotics. Well, did you measure if they were fighting each other? Because it's it's

Dr Mike T Nelson: a lot of competition in the

James LaValle: bloods. Yeah, it's the crypts in the bloods in that bottle, man. Those guys are going to fight.

So you'll want to find probiotics that have gone through all those paces of understanding that, along with evidence of use in humans, it being beneficial and reducing [00:23:00] inflammatory signaling, right? So I think that's a big one. One of my go to's is I use the Coyodopolis. They're fantastic for that, or the probiotics from Wakunaga because I really love that they do that kind of testing.

It's DNA verify, you've got the strain that was in the studies, right? That's important. And then I think that you've got to really get people to figure out how they're going to get the sleep. I think it's very difficult to get people out of sympathetic dominance, right? Without a good night's sleep, a good night's sleep means you're going to restore circadian rhythm of all the hormones.

that are being secreted the following day in your body, right? Because you've got this super charismatic nucleus or the master slave clock in your brain that is telling your body when to release insulin and when to make testosterone, when to make thyroid hormone, what am I doing during what portion of the day?

And when you don't sleep [00:24:00] well, that becomes a problem. So I will work at also using compounds like theanine. Rolora, those are compounds that help to quiet that sympathetic dominance to lead people. I always tell folks, if you're having trouble sleeping, you need to work on your nervous system during the day, because it's, by the time you do it at night.

It's Band Aid on bullet hole time, right? You got to correct for the hyper arousal, right? Correct for the hyper arousal of the HPA axis, right? During the, during those daytime hours. And then if you need to use some melatonin, or then if you got to use some zissipus, or, some kind of compound, Honokai, all A, whatever you want to use to bring that brain really to go into deep sleep.

Great. It's going to work great for you. But, I find that most people aren't thinking of sleep that way. They're like, Oh, it's time to sleep. I need to take something for sleep. And instead of, Oh, it's, I'm having trouble sleeping. That's

a disorder of [00:25:00] hyper arousal. I need to work on my nervous system and create balance.

So those are the areas I do. And I do it with lifestyle and breath work. I do it with making sure that we've got adequate trace minerals responsible for parasympathetic tone. Obviously the big one is, giving phospholipids. Because phospholipids build acetylcholine is the neurotransmitter for your parasympathetic nervous system.

So I'm big on, phosphatidylserine, phosphatidylethanolamine, phosphatidylcholine, and making sure you have that reservoir of phospholipids. It's repairing the cell membranes of the brain, repairing your cell membranes in your tissues. And also inducing acetylcholine, you'll probably geek out on this cause I know you're a lab guy.

You really love looking at things. We did a study back in my institute in Ohio where I took 10 55 to 70 year old male and females and cross matched them. And we measured, we did a functional MR and we did what was called a diazepam tracer [00:26:00] and we measured the acetylcholine to glutamate levels. So glutamate, excitatory, choline, inhibitory, right?

Parasympathetic, sympathetic. I gave them phospholipids for four weeks and then re scanned their brain. And in eight out of ten people, they reported thinking more clearly, feeling better. And that paralleled the fact that the phospholipid component of the scan went up because of the use of the phospholipids and making acetylcholine and the glutamate then came down.

And I think we miss sometimes these very simple things like, Oh, I need to build more acetylcholine to help my parasympathetic nervous system. which is going to reduce the inflammatory response of the sympathetic nervous system. And you have to do that in the brain. And then I love the gut because I [00:27:00] just think people just mismanage gut health all the time.

Dr Mike T Nelson: Would you throw choline in there too, like just as a choline source or making sure they have egg yolks or things like that also to help build phospholipids, since that's a component?

James LaValle: Yeah, if they wanted to either take phosphatidylcholine or eat choline derived foods, that's a part of the plan. The only thing that gets a little sketchy on that is if their gut is really, dysbiotic growing, they might not be converting.

They start pumping a bunch of that choline in and they might make something called TMAO trimethylamino oxide, which is an inflammatory compound, right? So I tend to go for more of those choline derived foods, watch, get a little more meat, get that, get the egg yolks back in there.

After I've done a little bit of work on cleaning up their gut, green drinks do a good job of that. Green drinks also help with [00:28:00] alkalizing the urine, reducing the oxidative stress, helping with kind of that gut microbiome a little bit, right? You have to chlorophyll, you're getting some mag. Those are some simple things that people can do.

Obviously, Yeah, for oxygenation, I know we, we just, we're working on a compound. It's called enduro too, which is a 98 percent solidicide which comes from rhodiola. Oh, it turns out that increases VO two max improves lactate threshold and increases tissue oxygen levels. And I think that's the other piece is that because people are breathing shallow.

They're making a lot of CO2. They got a lot of lactic acid buildup. And they got very poor oxygenation. And when you start to combine all that in one, and they're training hard, trying to get anabolic and gain muscle, they start compressing those microcapillaries. And, you can measure your micro [00:29:00] capillaries, right?

And I think that's another issue that, that people just flat out miss, it's like, Hey, it's all about getting oxygen to all your tissues.

Dr Mike T Nelson: So measuring micro capillaries, are you thinking like an endopath, like an FMD type measurement or what are you looking at for that?

James LaValle: I actually, if you're familiar with the glycocalyx or the inner lining of the artery you can measure that through a camera.

It's actually a wand that they put under the tongue and they can measure your microcapillaries and actually the PhD Hans Vink. Who discovered the glycocalyx. So when you see the pictures of the hairy, like projections of the inner artery, the artery, those are his pictures. And he developed that camera and it's being used at over a hundred universities and research centers.

And now in doctor's offices, you can actually get that machine. And in three minutes, you can know the [00:30:00] micro capillary status. And it turns out that a lot of athletes, the more heavily muscled they are, especially if they

haven't done fascia work, right? They haven't freed their ability to get the oxygen to their tissues.

Instead, they've got these ischemic pockets. It turns out their microcapillary scores are in the tank.

Dr Mike T Nelson: Oh, interesting.

James LaValle: Huh? Which is going to what? Yeah. And what's that going to do for their ability to recover from injury?

Dr Mike T Nelson: Yeah. It's definitely gonna be hampered.

James LaValle: Yeah. You can't get, you can't get blood to the tissues.

How do you get the nutrients there? And then of course there's other things if it's a connective tissue bone thing Then you got to worry about what's their hormone levels like Where's their estrogen and testosterone levels as it relates to that healing and that connective tissue bone connection.

So there's a lot of factors involved, but the one thing I know for sure, it all starts with oxygen. And and the other piece that I'm super passionate about is keeping people out of [00:31:00] neuroinflammation. Because I know that the more I can keep the brain, the micro glial cells from being overactive, the clearer the signals come from the neurotransmitters in your brain to tell your body what to do, how to move, how quick, how slow, what position, what angle.

And I always ask people that are lifting weights, when you go up to a bar and you like, you're going to deadlift, for example. Everybody can tell me that just when they squeeze the bar before they lift it, they either know they're going to get it or they're going to have trouble. And I really believe that's that neurologic signal that if you have more clarity, less inflammation, you're going to fire faster with more force.

And more consistency of force, right? Repeated reps that are superior as well. So I've been big on, I worked with Corvette [00:32:00] racing and I developed this compound called ginsenicide R3 because the

Dr Mike T Nelson: one that's in this guy, or is it similar?

James LaValle: Yeah. Synapsin. And there you go. Yeah, that's. Yeah. And how we developed that was that we had them do telemetry and they're racing and we

saw their core body temperature was going up and their reflex time was off then.

Right? So they're not racing as accurate. You're going to turn 3 at 180 miles an hour. The brain's saying. Hit the brake, turn the wheel and your muscles are going, what, it is not answering, and of course they were not winning races and we went in Dr. Heyman, Andy Heyman, my medical chief medical officer.

And I was like, we went in and we cleaned up their chemistry that, but the big thing I did was I created this nasal spray of this ginsenicide R3 before we were able to put it into a liposomal tablet. And we would spray it before they got in the car

Speaker 2: and

James LaValle: lo and [00:33:00] behold that they won Le Mans, and the driver said, man, I could tell a huge difference in my accuracy, my braking, my acceleration, they could just tell and it isn't magic because we've used it in tactical forces.

Hey, we had shoot more accurate, more consistent, for TBIs, Hey, I'm getting back from my injury. Quick. And I think it's very interesting that we haven't paid more attention to that chronic low grade neural inflammation. And I think that's that's what happens that like what you talked about, those sympathetic monsters that are driving hard for two years, your brain's on fire.

Lose capacity, right? They lose reserve and, and the ones that can turn it off and let the sizzle go down, right? The brain's going hot they're able to turn it off there, they're therefore able to restore that neurotransmitter balance. And be ready for that next day of work that they've got to do [00:34:00] on the field or on the court.

Dr Mike T Nelson: Yeah, our mutual friend, Luke Lehman from Muscle Nerds, we both were comparing notes once and he's we said, we both got really into lactate testing by three or four years ago and we found a couple, both of us compared notes and we found the same thing that. The athletes and clients that were super, super stressed.

Some of them were spinning off two, three, four millimolar of lactate at rest before they did anything. And I was like, holy crap, because the first time you told me you had measured that and I'm like, I don't know, I like measured a few people and so I took the train wreck people and I'm like, oh my gosh, like you're

so stuck on that sympathetic carbohydrate use and that your lactate levels are sky high before you've done any exercise, like your body is taking that whole system and ramped it up to try to deal with the stress that's going on.

Yeah.

James LaValle: Yeah. And, I think a lot of [00:35:00] what goes on there is they go into aerobic glycolysis, right? Because they, basically they're no longer efficient at transporting glucose. So when you're under that constant cortisol, adrenaline piece. You start becoming insulin resistant, so your insulin receptor is not functioning well.

So now you start taking glucose into the muscle, or into your cells, all your cells, not just muscle. But you're taking that in passively. So you go through the glute 1 door for glucose delivery instead of glute 4, and that's a difference between 30 plus packets of energy and a little bit of lactic acid waste to 2 packets of energy and a bunch of lactic acid and pyruvate waste.

Right? And so even at rest. That's why, diabetics, they, their endurance and stamina so poor usually because they're a two pack for energy, lots of lactate chemistry, and I, I remember when I first got onto that, I participated in running [00:36:00] a textbook called diabetes and cancer epidemiologic evidence and molecular links.

Talk about something that'll get you to sleep at night. Open up any paper, that book you are done, like one paragraph. It's okay I know I'm going to sleep now . But it really drilled into me and I really do believe this, that all past lead to disturbances in glucose regulation. That whether it's I'm under stress or it's my diet.

I'm over training or I'm not getting enough sleep. And I, and one of the reasons I believe that as I look at the GLP one L craze, that's going on now where everybody, Hey, I can get weight to come off no matter what I'm using this GLP one. And that's because. When people get in that sympathetic tone and they get into aerobic glycolysis, they start making a bunch of glucagon.

And so you can never access your fat, even when you exercise. So people say I trained hard. I exercise. I [00:37:00] ate exactly what you told me. I only lost one pound over eight weeks. Well, that's because at the beginning of the talk, as I said, your metabolic circuits are broke. You don't have the right signaling to get to your fat.

Right. So it's interesting when you start to see that, because I see a lot of athletes with blood sugars in the mid nineties on fasting, and by default, that tells me they're already, they've already started to break their glucose regulation ability.

Dr Mike T Nelson: Yeah. And through my lens, I'd. I agree a hundred percent.

So I think of it in terms of metabolic flexibility, right? You're so stuck in that carbohydrate end of the spectrum. You can't downregulate, you can't drop insulin to actually use fat at low to moderate intensity exercise. You're just trying to get out of this stress loop. Your poor body is. Using the high stress pathway to get energy because it is under such a high amount of stress.

So you get like stuck on that end. [00:38:00]

James LaValle: That's exactly right. And it's, and it's that cascading effect that occurs once you get there. You end up creating more bad actor lipids. You end up creating problems in your iron to ferritin ratio. All of a sudden you're not storing ferritin, your iron's not going to ferritin because you upregulated your hepcidin due to that metabolic stress.

And when it gets bad enough, when you become a full blown diabetic, well then you start making, you're storing too much ferritin, right? And your ferritin goes through the roof. But the, but that reality, there's certain things I really like. And I'm, I love supplements. Otherwise I wouldn't have written 26 books with them in them.

So yeah, I love age garlic extract. I love coyote because man, I don't know of a single supplement that lowers IL six and TNF alpha, it reduces inflammatory lipids. [00:39:00] It improves blood pressure, diastolic. It's reducing that sympathetic duress on the blood vessels. It's just doing, and then they just did a recent study on it where it showed, middle aged athletes, they improved their recovery, increased their VO2 max, decreased their lactate.

By taking that. And I think that there's, well, there's other things that are good. You use things to get your nitric oxide up. I love the 98 percent solidicide for the pure oxygen play of, increasing oxygen, increasing VO two Max. That global pattern that we have to be concerned with, of course, if it's, not, it's the athlete that's retired is, well, where does their cardiovascular system end up?

Dr Mike T Nelson: Yeah. Yeah.

James LaValle: Are they lacking are their microcapillaries compromised? Are they losing their perfusion into their tissues? I see more and more people, athletic, muscular people with poor kidney function. Their glomerular filtration rate is low, and [00:40:00] that's because blood vessels are tight, you're getting more oxidative stress in the kidneys, and that leads to damage in your kidneys, and now you can't filter.

Fortunately, you can turn that around, but I look at that, um, age garlic is almost pleiotropic. So I think it's pretty interesting as a compound. And then, obviously there's, I don't know, I've never been a supplement I didn't like. So, I think there's a lot of ones you can have value, cordyceps for oxygenation is really cool.

Right. But I think in general, even on supplements. It's people end up thinking, the bro science stuff, instead of getting good foundational information on quality ingredients, like just because Cordyceps been on the market for 25 years, doesn't mean it's not good to still use if you get the right kind, right?

It's no. There's Tibetan goji berries out right now. And they've been picked by a monk. While the white [00:41:00] tiger was chasing him and he was staying in his parasympathetic tone while he was picking them and then we grind those up, right? That kind of stuff is I can't help but laugh a little bit because I've just been in this business so long and, taking nutrients and eating better really can have just dramatic impact, not just on.

If you're in your playing days, it's great. I want to help people play longer, but I want them to come out of the game they're in, whether it's college and they're done high school and they're done pro athlete finishing, you're coming out of there still whole you're coming out of there healthy. You've created homeostasis and allowed that.

Higher order of demand to, for you to be able to do it, but you have metabolic reserve and resiliency at the end of it all.

Dr Mike T Nelson: Yeah I agree. And I think with supplements, I'm actually a fan of supplements, but again, it's, [00:42:00] what does the research say? What are they used for? What is the indication?

When do you use it? And then also just. Being realistic with what are the effects size, in general, you're talking like single digit percentages, which again, to lead athletes is like a massive difference to, someone who's again, diet looks like a

floating trash bin fire. Like you can't just toss supplements at it and expect to solve all their issues either, which is the other thing I see.

Not, I'm not saying you do this, but I'm saying in the industry, it seems to be supplements are shit. They don't work or. They'll solve everything.

James LaValle: Yeah. And I, it's so funny. It's we're, two brothers from another mother on this, right. It's because, in my, in all of my clinics, all and everything I teach at the American Academy of anti aging medicine, because I'm the co chair is 15, 000 docs there.

Right. The international peptide society. I'm the chair of, I always emphasize. [00:43:00] You have to have someone in your office teaching people how to eat yet. And it isn't learning how to order the biggie meal. That's 50 percent off on Wednesday, because you get a free shake when you order on Wednesdays too, right.

It's, I always say, the one thing everybody needs to do. Everybody needs to eat. Everybody needs to hydrate. We know that if you go five days without water, it's going to be bad for you. Everybody needs to eat. Everybody needs to hydrate. Everybody needs to sleep. And then it becomes, well, how do you need to eat?

Do you have any sensitivities? Are you a gluten sensitive person because your gut got broken down? No, is it dairy? For me, it was dairy. Dairy for me, I can't eat dairy. It's absolutely miserable for me. Cause I'm Italian. I want dairy.

Dr Mike T Nelson: Oh no.

James LaValle: Yeah. It's I can't have cows dairy. I get really phlegmy.

I can feel it. I get, I hold water. And. And, you look at that and it's okay. So what are the right [00:44:00] foods that I can eat that decrease my inflammation and histaminic response? And then you can get into, okay, what are we going to do for performance? Are we going to work on increasing, the, your capacity for your brain?

Are we going to get into upregulating mitochondrial energy production? We're going to add some CoQ10 and PQQ, what are we going to, what are we looking for your particular metabolic roadblocks that you have? Is it simply a gut thing? You're a kid that was on a bunch of antibiotics and therefore you're, you got no good flora, your gut's permeable.

And, so now you're not even absorbing your nutrients when you take them. So good luck taking a bunch of pills. They're not going to get there. And that's the other thing over the years, when I started out, I used to think, God, I got to give people a lot of stuff. And over the last 40 years, it's more about, no, I just have to pick the right stuff.

Speaker 2: Yeah. Where's the leverage [00:45:00]

James LaValle: people less if I make sure I'm tailored to what they need. And I think that's a key thing too, is, more isn't better. I'll have people come to me on quote, longevity protocols with four pages of an Excel

Speaker 6: spreadsheet.

James LaValle: And I'm like, yeah, how do you have time to do this?

And then I'll look at their labs. They come through the clinic. I got my doc, my nurse practitioner. I look at what they got going on and it's well, your blood sugar is still 95, man. You're still at a 60 percent risk of being a person with diabetes with a 95 blood sugar, or depending on which study you looked at, if you're looking at the Kaiser study, that was 47, 000 lives over 10 years, it was 6%.

For every point over, over 84, the Japanese study that recently came out on 31, 000 lies was 9 percent for every point over 90. So, people don't understand and then it, and then you start to combine that, right? So my glucose is up, [00:46:00] my insulin's up, my lactic acid dehydrogenase is up, right? My lactate's up.

My blood pressure is a little off. My electrolytes are low, and all of a sudden you got this string of pearls saying, Oh, you're a mess. Okay. Let's get started. Let's get started on that. Yeah. Let's take those four pages of your spreadsheet and burn them. And then let's start to figure out what you really need to do.

And that's like your point of it's that person that thinks of just take all these cool supplements and peptides. And get bio identical hormones, I'm going to be amazing, but I'm not going to pay attention to my diet or my stress or my sleep. So it's interesting.

Dr Mike T Nelson: Yeah. It seems like even with social media and everything else, everybody wants the quick fix and I get it.

Like everyone's looking for leverage, looking for the latest, greatest, they want new. But as from being around forever is [00:47:00] there's no single bullet. There are things that can definitely help. There's things that definitely can have large amounts of leverage, but it's rarely one particular thing.

So even like one of the biggest changes I made probably four or five years ago was just putting stuff in phases. So. Hey, we're gonna work on your aerobic metabolism now I like things like CoQ10, PQQ, like the stuff you mentioned, but we're also gonna train the shit out of your aerobic system while you're taking those to try to get it to a high enough level we can for a set period of time.

We're gonna keep that on maintenance, and we'll probably even maybe pull you off some of those. And then work on the next thing instead of trying to dump everything in the kitchen sink and expect everything to work. It just doesn't work that way.

James LaValle: Yeah, and my big pet peeve that I've been working on and it's very similar to that is that, people always want to do things to.

Optimize

Speaker 2: and

James LaValle: optimize means you're [00:48:00] always pushing your mitochondria and that curiosity effect, right? Hey, we're going to, we're going to work hard now because we're focusing here, but then we're going to take a rest from it and move to something else that's really important because, I talked to this mitochondrial screening company and they've got an interesting test that's validated the punch biopsy.

And, they said, they tested some, I'd say, known biohackers in the market. And they said, you know what, there's the people, Hey, I'm doing IVs. I'm doing, I'm, I got it all going in me, right. I'm doing an IV while I'm in my ice plunge. I got my glasses on, I'm doing my vagal stimulator all at one time.

Right. And those folks end up having more issues with their mitochondria than, even average folks. And I think it goes back to that thought of, I know it's weird, but common sense does [00:49:00] matter. And then you need, it's an odd concept, I know. And it's also this fact that, make informed decisions.

Don't just take some social media post. I'm my son has me on social media. I nine months ago I actually searched my name on the internet for the first time.

Dr Mike T Nelson: Kind of humbling, isn't it?

James LaValle: I'm in that age group. No, I'm in that age group where I didn't know. And all of a sudden I was wow, there's a lot of stuff with me on here.

So I started doing social media, obviously just cause you need to, and I'm enjoying it. I'm enjoying it. I really am. And but I would ask people question what I say in 30 seconds.

Dr Mike T Nelson: No, sure. You

James LaValle: know, like you'll find out who's well informed and who's not relatively quickly because you have a lot of that type of.

Information that just gets dumped out there and it's not [00:50:00] based on, great evidence, and, I've done enough work educating that, you got to find that evidence, what's working and then, hey, if you've got something and doesn't have a lot of evidence yet, but you got a hunch on it, guess what?

You're going to look at what happens when you do it. And you're going to be able to find out, Hey, that worked. And those, and that group of people. And, I've also done that over the years and found some great compounds based on doing that.

Dr Mike T Nelson: Yeah. And that's the art of it too. It's I've often joked when not really joke, but if somebody comes out with some brand new compound and there's no data on it, like a lot of people are like, well, it doesn't work.

There's no data. I'm like, if there's no data, that means we, we don't know if it works or not. Like you can't assume that it's not going to work. Like odds are it may not odds are it's probably not going to be a game changer, but things like creating caffeine, things that have been around forever that have just monumental amounts of data.

Those things exist and, do have pretty significant [00:51:00] upsides and, there's always a risk and a side effect to everything, but you can't just assume that it's always going to be a negative either.

James LaValle: That's exactly it. That's right. I think that's go on chemistry and you take a look at what is published and then you go from there, but no, obviously you want to do things that you think have a good chance at working because the last time I checked.

People don't come to work with you if you're not having success with them.

Speaker 2: Yeah. I can't let me

James LaValle: give you, let me give you some more money because you're not helping me at all. And I, I've been pretty passionate about that. I actually, when I teach healthcare providers and performance leads, I always tell them, you got to pick the things that people are going to feel a difference.

And that means you got to change your diet and you got to pick the nutrients that they take and they go, wow. And you got to do that relatively quickly. You can't expect them to hang in with you for a [00:52:00] year. You want to get them going and feeling better, four weeks, they should be noticing something.

Right. Something positive should be shifting somewhere.

Dr Mike T Nelson: Yeah. And related to that, on your dose of magnesium is that elemental? What type of magnesium? Because as there's everything from magnesium oxide, which has a friggin what, 4 percent conversion, is basically fucking worthless, to, other ones that are higher converting, but there's I don't know what 12 different versions now, like any more details or what do you recommend in that world?

Sure. Could be its own podcast. It is

James LaValle: Elemental.

Dr Mike T Nelson: Okay.

James LaValle: Yeah, no, it is Elemental. So Elemental Mag, and you're going to have to do that. You have to spread it out. If you take, if you're a Oh yeah, you're going to And you're going to take a thousand milligrams all at once, or, you're going to be running to the bathroom.

So you want to spread that out over the day. And plus it's better to spread it out over the day to get better, better maximum absorption. I'm a big fan of magnesium bisglycinate. I think it's easy on the gut. It absorbs well. I like

[00:53:00] the Albion, the Trax amino acid chelate version. It's a double ligand bonded one.

Glycinate tastes horrible though. Yeah, what? You're not willing to just take anything in order to get better results? Yeah, I've taken it, but trying to get clients to sign off on that one. Yeah, well you gotta get it in a cap. Yeah, I put it in a cap. Yeah. Yeah. You just put a capsule. Mag tar rate is good, especially if they're having more like palpitations, they're sympathetic dominant and they get a little bit of palpitations.

So mag tar rate is good. Both of them will be around 20 percent elemental magnesium per capsule. So a 500 milligram capsule will yield a hundred milligrams. I always tell people that minimum threshold for mag is, get 500 milligrams elemental a day if you're training. No, that's the minimum. Mag three and eight, while it's great for the nervous system, you don't get a lot of magnesium in it, three capsules, 2000 milligrams, get 144 [00:54:00] milligrams of magnesium.

I like mag malate. But for women, if they've got IBS, if you have any kind of GI stuff, the malate sometimes is a little tough on them. But obviously malate's got those great studies on, getting rid of lactate out of the muscle. So I like, I, so you'll see all these blends, we're, 20 percent malate, 50 percent glycinate, 12 percent taurate, whatever, it's like a mutt of magnesium.

I tend to use the bisglycinate. It's easy to absorb. It's gentle. People don't complain that, they don't see many G. I. Issues with it. And then just space it out over the day. And I think if you're training more than an hour a day, or you're training hard, you got to get that. And nobody's eating.

10 servings of dark leafy greens and drinking chlorophyll, cause you get mag from chlorophyll, right? Cause the center of the core of the molecules in the

Dr Mike T Nelson: middle,

James LaValle: the whole guy in the middle, [00:55:00] just like with, when you're eating a steak, that little guy in the middle of that, he, my iron is iron and and, but nobody's doing that.

Right. And I think those are important things to keep in mind. People are on the run. Usually they're eating quick. They're not sitting there getting that big bowl of greens. Like I would like them to I know I do it a lot of days to try to get

them in a lot. And so therefore by default, they're usually going to be deficient and mad, and I rarely have somebody test.

A red blood cell magnesium that's 5.6 or higher, which is my goal. Five six to six two. They're rarely there. It's usually in the high fours or the, low fives. A lot of times the low fours 'cause the range is like 4.2 to 6.6. They'll be right at 4. 2 or 4. 4, they're complaining of, yeah, my legs feel heavy when I go up steps and okay, and [00:56:00] and so that's a big one.

Right? So I think if there was 1 thing, I think everybody that exercises should do is. Take magnesium. That's number one for me. That's number one. And then you think about, if you're training for, you're getting a lot of endurance training in, you got to think about the probiotics.

You got to think about keeping that the, the urine alkaline. People could buy, urine, they can buy pH strips, right. They can get a roll of pH strips, you get them in 0. 2 measurements and you tear them and, you can tear that roll off and do a first morning urine. And if your urine pH is 5.

5, you better get on. Getting some magnesium on board. It should be at least 6. 5. And they published studies on this and people, when they corrected their blood pressure, corrected their lipids with medication, and corrected their glucose, so the big three of metabolic syndrome, right? Get your [00:57:00] blood pressure better, get your glucose better.

It, get your lipids better if they did not correct for urine pH. All right. They continued to progress their renal vascular damage and had endothelial dysfunction.

Dr Mike T Nelson: Oh, wow.

James LaValle: Yeah. Yeah. And that was both in diabetic and non diabetic populations that they did those studies. Yeah. So it's, it makes sense because.

If I'm creating that oxidative damage and I've got that acidotic urine, I'm putting pressure on the renal capillary system. 40 percent of people are hypertensive because they've got renal hypertension, right? They've got a lot of adrenaline back to that sympathetic monster. When you're making a lot of adrenaline, those blood vessels get stiff.

And when the blood vessels get stiff, you're not delivering blood and oxygen and [00:58:00] nutrients to the tissues that need it for repair for the next day.

Dr Mike T Nelson: Very cool. As we wrap up here, if you've got a few more minutes, I wanted to ask you about so on the supplements you did, I noticed you did a lot of liposomal formulations and talk to us about.

The industry and liposomal delivery, because I've chatted with other people who have done liposomal delivery directly. I won't name what companies, and we'll say the quality of said product after a few months on the shelf is extremely variable to say the least.

James LaValle: Well, and that's because it was, yeah, it was because it was probably a liquid.

Liposomal liquids, what they do is it's almost like two magnets that are pushing each other apart. So the particles stay small, but eventually that polar attraction comes back and then they then the particles start to agglomerate. Now you got this huge [00:59:00] molecule. It can't be absorbed. I got on to this because of talking to a pharmaceutical scientist that had these worldwide patent pending for all drugs, all nutrients on solid state liposomes, where you take a small particle.

Under a hundred nanometers, which crosses the blood brain barrier. When you're around a hundred nanometers, you will get cellular absorption. And they could prove that after two years through electron microscopy and fluoroscopy, they can show that the particles are still in that distribution under a hundred nanometers.

And so we know that the stability is there because we can see it based on sampling under electron microscopy. And that creates the ability to take difficult to absorb compounds and micronize them, put them in that solid state liposome and be able to get them to absorb. So things like glutathione bear [01:00:00] brain, curcumin, a lot of different compounds that synapsin that you showed that's a tough one because doing that orally, that RG3 orally.

It's just too expensive. You couldn't afford to take enough of it or get it to get through and get absorbed. And so when we did that, we were just crazy surprised at how effective it was, and it's interesting how you get these scientific breakthroughs. My son's a linebacker at Utah state.

His roommate defensive end at Utah state. They're probably playing beer pong for all I know. And they asked a difficult question. They said, what's your dad do? And, his dad and grandfather had developed this technology. My son knew of all the work that I have done in the dietary supplement history.

And so we actually met based on [01:01:00] those two roommates.

Dr Mike T Nelson: Oh,

James LaValle: wow. It's cool, really, serendipity. Right. Yeah. And so we, and we've really, we've done more than play with it. We're very serious about it because what we're seeing consistently is that people feel the product. They notice a significant difference when they take it.

And that's always my beef about dietary supplements. If you don't feel something or see a change in your labs, especially feel something, why am I taking this? And so I've always tried to design products that were impactful and that meant, stronger doses, the standardized extract exactly used in the studies and then in combinations from what I would call a new Chinese medicine way of doing it, of looking at.

Formulating around the problem, right? What are the different mechanisms that relate to a problem? And what the solid state liposomes allow us to do is take very difficult to [01:02:00] absorb compounds and get them to absorb and create some really eye opening. People go, wow, these things really work.

And so it's, pretty exciting.

Dr Mike T Nelson: That's cool. And I also mentioned you, you do have a liposomal oral BPC 157, correct?

James LaValle: Yeah, we do. And that, once again, as a dietary supplement works great and we've had tremendous feedback from physicians as well as. People that are allowed to take it.

Obviously, if you're being drug tested, you cannot take BPC 157. It's on the ban list, so don't do it. But for those that aren't tested the BPC 157 has been Just phenomenal results because we're enhancing its absorption.

Dr Mike T Nelson: What are the results have you seen from that? Is it mostly like general soft tissue repair?

Or have you have seen some like gut repair too? Or is it more soft tissue because you're bypassing the oral gut?

James LaValle: Yeah, it's good. It's good. Well, you're chewing it up. So [01:03:00] it does get down to the some will get down. Yeah, we do see how people get. Improvement in their sensitivities and allergies.

We do have people that, we had a guy that had an Achilles tear, got and was chewing that stuff up. And six weeks later, he's squatting pretty amazing. Right? So we're finding it to be effective for repair. Both in the connective tissue, muscle tissue, but then the gut, it's working very well.

Yeah, it's very, PPC is an interesting compound. Not a lot of human studies on that.

Dr Mike T Nelson: There's almost none. I kept looking for it like years ago. I had this discussion with Luke and I'm like, I don't know, man. And so I went and tried to find any human studies I could. I did this again four months ago.

There's very few. I was shocked. I was like, what? This seems crazy. Yeah.

James LaValle: I know, because everybody knows how well that compound works. It's something that's out there. And then of course, FDA put it on the do not compound list category. [01:04:00] You're not compound. So now you can't get the injectable and you can't, you can't get it from a compounding pharmacy.

So it's regulated to that dietary supplement category, which is fine. If you can find a way to deliver it. And but yeah, I, that's one of those that, Hey, there's no humans. There really no human studies of any magnitude, but yet. Everybody's used it very popular and they're going, Hey, we don't care. It helps me to feel better.

I, I hurt less. I feel better, my gut's better, I'm going to go ahead and use that.

Dr Mike T Nelson: Yeah. Cool. Well, thank you so much for all your time. Where can people find more about you? I know you've got the Supplement Line Metabolic Elite, and you've got a ton of stuff on the Instagram and everywhere else, so where are some of the best places?

James LaValle: Yeah, the real Jim Lavelle, so real Jim Lavelle on Instagram, jimlavelle. com, if people are interested in that kyolic or the or the probiotics, I'm a huge fan of, you can go to kyolic. com. They've got 900 publications, well over [01:05:00] 150 studies on aged garlic extract and they're the company that does all the DNA verified probiotics.

So I'm a huge fan of them as well.

Dr Mike T Nelson: Awesome. And I also wanted to say. Your book, which is a few years old is phenomenal. My buddy, Dan Garner recommended it to me and I've been making my way through that and it's super useful. It's very well laid out. It tells you the basics, but it gives you all these little significant like pearls along the way too, for, I don't know, what do you sell it for 20 bucks or something on Amazon, I would highly recommend that if people are interested in it.

James LaValle: Oh, I appreciate that. And I'm actually editing today, editing the new edition of that. So a new edition of your blood never lies. That'll be out here shortly. I got it. I'm finishing the last a hundred pages of just nips and tucks. And we'll have that out.

Dr Mike T Nelson: Cool. Well, thank you so much. I really appreciate it.

I would highly encourage everyone to check out all your stuff. And yeah, thank you for putting out all the books and the content and everything [01:06:00] over the years too. I really appreciate it. It's been amazing.

James LaValle: That's, I really appreciate that. And Hey, by the way, congratulations on second edition on a triphasic training, man.

Dr Mike T Nelson: Yes. Thank you. It's finally out and took nine years as writing books, especially with other people is not the easiest thing in the world, but yeah, we're super happy. It's finally

Speaker 6: out to work with within the world.

Dr Mike T Nelson: Oh my God. I love Cal, but it's, if you met Cal, it. It's crazy. Cause he has like these amazing ideas.

Like he's doing stuff like no one else has done. He does the research, he does all this stuff. I've known Cal for 20 years, but the hardest part was trying to put that in a systematic view for people who don't know him and are not familiar to the system and to have it make sense and have it be still legit, like his stuff.

And not. Changing it just to put it in a book. Yeah, that was the hardest part. And I'm sure with your stuff too, it's like, how do you organize it and get it in an order [01:07:00] where people are new to your stuff can go, Oh, this was good.

This was good. This was good. That's usually always, I find the hardest part, but the most valuable for the readers and everyone else at the end of the day, too.

James LaValle: Yeah. There's a real art to it. So, well, congratulations. I'm glad you persevered and got it out.

Dr Mike T Nelson: Yeah, me too. Thank you so much. I appreciate it. All right. Yeah. Good one.

Dr Mike T Nelson: Thank you so much for listening to the podcast. Really appreciate it. Huge thanks to James LaValle for coming on the podcast. So great to talk to him, especially someone who I followed his stuff, like I said, for over two decades now to sit down and have a chat about all the great stuff he's got going on.

I really highly recommend you check out everything from his books to courses to all the in person stuff he does, a supplement line at Metabolic Elite. Really great stuff. Love all the things that he's doing there. If you're looking for ketones to put you in a state of ketosis that don't taste horrible.

I'll check out my friends over at Tecton Ketone Esters. We'll put a link to the code [01:08:00] down below there and also element. If you're looking for an electrolyte supplement, you can check that out down below there also and make sure to sign up to my newsletter. If you want more great information. Thank you so much for listening to the podcast as always really appreciate it.

If you could hit the old subscribe button or download or give us some likes, if you could even leave us a comment, that makes a huge difference. distribution of the podcast, helping out with all the old algorithms there. So thank you so much. Really appreciate it. We'll talk to all of you next week.

Speaker: There's something wrong with this hearing aid. Yeah, what's wrong? I can't hear with it. Oh, no wonder. It's too far away.

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