Introduction to Dr. Molly Maloof

Welcome to the Bio Optimized Summit, where we are exploring the next level of physical and mental health you can achieve through targeted and intentional optimization.

I am your host, Doctor Amy, and today I'm very excited to have with us Doctor Molly Maloof. She is on the frontier of personalized medicine, medical technology and health optimization, and she is working as a pioneer in Silicon Valley with her medical practice.

And since 2012, she has worked as an advisor consultant to more than 40 companies in the digital health, consumer health and biotechnology industries needing help with clinical strategy, product development, clinical research and scientific marketing.

She has given her expert opinion on nutrition and human performance to companies including Mars, Bayer, GSK, nature, Made, Quaker, Red bull Summer Water and Thistle with a goal of food system transformation through improving corporate products.

She has spoken at Dreamforce, Wired, Health, Women's Entrepreneur Entrepreneurship Day at the United Nations, Dodd and many other high profile conferences.

She has a concierge practice and she provides health optimization and personalized medicine to achieving to high achievement entrepreneurs, investors, and technology executives in San Francisco and Silicon Valley, as well as award winning Hollywood actors and musicians.

Unveiling the future of patient care with actionable insights on adopting the latest practices in personalized medicine. Doctor Molly challenges healthcare practitioners as well as industry influencers, to rethink health and health care in order to reduce costs, improve patient outcomes, and improve the human condition.

Doctor Molly, thank you so much for joining me today. I'm very excited to have you on. Thanks for having me. And today I'm excited to talk about the mitochondria and blood sugar levels, because this is such an important topic.

Most people don't realize even what their blood sugar levels are doing, how this can really be affecting their energy, draining their performance, and how mitochondria are really at the root of all of this.

So let's start right there and just talk about blood sugar levels as an energy drainer. What do people need to know about this? Well, what people should know is that when you go to your doctor every year and you get your fasting glucose and your hemoglobin, one C, which is an average of your fasting glucose over about three months, and you're fasting insulin, if you're lucky, you're only getting a small percentage of the picture of your blood sugar, which means that you're not actually seeing what's happening when you eat meals, largely because most people don't get glucose monitors from their doctors, because usually those are only prescribed for people who have diabetes.

Now, the problem is that when people eat foods that are super high carb, like packaged processed chips, candy, cake, soda, you know, these high sugar, high refined carbohydrate foods, they can cause blood sugar spikes.

And every time your blood sugar spikes, you damage your blood vessels. And a lot of people might have a normal fasting glucose, and maybe they have a normal fasting insulin.

And maybe even going, I think is less than pre-diabetic. But they're having these silent spikes and they're not knowing that their their blood vessels are being damaged.

And so they may wake up with heart disease one day and wonder, how did that happen?

Why Blood Sugar Spikes Drain Energy

How did I end up with damaged blood vessels? And everything was fine. Lab results were normal, lab results may have been fine. And the thing is, is that I started putting a glucose monitor on myself, 5 or 6 years ago because I was doing some consulting with a blood sugar monitoring company, and I discovered that I was having these spikes in my blood sugar and that my average fasting, my average blood sugar was pretty high.

It was, way higher than it should be. And I was a little bit concerned about this because I thought I was so healthy and I was gluten free foods because I was switching away, I realized I had celiac and I was switching over to gluten free options.

But all of those gluten free pastas and gluten free breads and gluten free crackers were actually causing harm to my body. And I used to struggle with acne.

I used to struggle with liver problems like liver, sluggish liver. I used to struggle with, a lot of things that frankly, really did improve over the last few years as I've gotten, much better at managing my blood sugar.

So I started figuring out for this, company I was working for, you know, how could I reverse engineer the blood sugar curve? How could I make the post-meal blood sugars go down?

How could I, make my fasting blood sugar go down? And I kind of started with this first principles approach, and I said, well, it's postprandial blood sugar is due to what I eat, but maybe I should change what I eat to lower my postprandial blood sugar.

And so I started cutting out all of those refined carbs. I started replacing the sugar, you know, with more natural sugars. And I realized, well, those were still spiking me.

And so I started replacing those with things like stevia. And I was like, oh, wow, now I'm finally getting my blood sugar under control. Post-Meal. But I still had a fairly annoying fasting blood sugar in the 90s, and I thought that wasn't quite good enough because I had been doing research, and the research seemed to suggest that even if your fasting blood sugar was in the 90s, it was still setting you up for diabetes later on in prediabetes.

And I didn't want that. So I started to fast. And I thought that, you know, maybe first principles if if you're fasting, blood sugar is determined by your liver function in your glycogen storage, then maybe if I drained the sink, my fasting blood sugar would go down.

And believe it or not, it went down. And it's now in the upper 70s, lower 80s. And so when I'm stressed out, it goes up. But when I'm in, when I'm normal, when I'm when I'm in a more homeostatic, you know, a place, a better homeostasis or what I should say is this, which is the ability to maintain stability through change when, when I'm in that state, my body is actually feels like it's functioning better and my skin is so clear, my my wrinkles have gone away like my my acne.

I have really bad back acne and that's been gone for years since I started doing all of these things to fix my blood sugar. And a lot of people don't realize that blood sugar is linked to insulin, output.

So when your blood sugar spikes, your insulin spikes, and when your insulin spikes, that causes excessive growth and excessive storage in the body of fat.

And it also causes acne, which people don't realize. So what? I really got my insulin under control a lot of things improved my health. And also what also improved was my focus.

So my ability to focus got better and my brain function improved. And like all these things got better. So I became really passionate about sharing this information with the world.

Now, I'm not saying that I have like a perfect, you know, physiology at this point. There's still a lot of things that I

think I need to do to optimize, but I would say that of all the things that I've optimized in the last ten years, blood sugar is by far up there in the top three.

And I think more people, are going to be able to have access to this and to this exciting technology because companies like levels. And if you're in Europe, Super Sapiens is another company.

These are coming out and they're creating content containing software that you can use with your Abbott, Abbott Abbott freestyle library, which they will prescribe to you.

And you can start tracking your blood sugar, and you can even just ask your doctor to give you a, CGM prescription. And oftentimes that if you're nice and you really tell them this is what you want to do to learn about your health, they'll give it to you.

So, yeah, that's where I'm at now. And, you know, I've been I'm actually writing a book right now on health span. And a big part of it is mastering your metabolism.

And so I'll be talking a lot about blood sugar regulation and, promoting glucose monitoring as a tactic to get healthier. So yeah we aren't measuring that like we don't know what's going on.

And so we can feel awful. We can have even like the postprandial energy crashes or the focus loss of focus afterwards. And we don't realize that it's actually because of our glucose levels unless we're measuring that.

And I agree with you. When I was going through my, you know, initial health optimization because things are not where I wanted them to be, changing the way I ate and watching my sugar levels was one of the biggest hacks that I did for my health, and I was shocked at how much it was influencing my daily energy levels and my focus, and how much I was just having to, try to, like, regulate my sugar levels unknowingly because it wasn't even something that I had thought of measuring before.

Right. And, how much I was intentionally trying to do that just to maintain somewhat of a focus and be able to get through my workday. Right. So to answer your original question, because I realized I didn't quite do that.

When you are eating food, let's say you're a, person who eats, you know, a normal American diet. There's carbohydrates, fats and proteins. And the highest glycemic response is from carbohydrates.

The second highest is from proteins, and the third highest is from fats and fats usually don't really produce a glycemic response, but they do produce an insulin response.

And and so when you are eating largely a high carb, spicy, typically the refined carbohydrate diet, you will see your blood sugar spike higher.

Using CGMs to Track Glucose and Improve Health

And not everybody is not a nerd, and not everybody has glycemic disturbances with refined carbohydrate rates. Plenty of people eat refined carbs all over the world and do fine.

But, the problem is, is that most Americans are not moving enough to justify their carbohydrate consumption as fuel. And so the blood sugar is it doesn't have a sink to go into because they're already filled with glycogen in their muscles.

So the muscles or muscles and liver both have glycogen storage as a as a fuel supply. And when people are eating all the time and they have a full tank of gas available to them and they aren't fasting, and then they go pile pancakes for breakfast on top of that setting, what they have is the conditions for blood sugar spikes.

And when blood sugar spikes, insulin spikes, and then insulin when it spikes too high, it starts putting that blood sugar away sort of forces it into the cell to go store, go get stored.

You need, you need, you need you need to put you in the kitchen. But the kitchen spoon. And so the bunch of guys know where to go. So it just keeps it just stays really high.

And the problem with that is that again it damages blood vessels. But the other problem with that is that eventually the blood sugar is going to get put away.

And essentially when that happens with you, can you often see a compensatory drop into hypoglycemic range. And so what you see is these these curves that are going up and down and up and down and there's these big spikes and these big drops.

And so everyone's just kind of writing this glycemic rollercoaster all day long. And the problem with that is that you just have this constant, like, I just ate, but now I'm hungry, I just ate and I'm hungry.

I just ate, but I'm hungry. And you don't get as hungry when your blood sugar is more even stable. And so what I've just discovered is that you can tailor a diet to a person's glycemic response.

And one of the other things that you can do is you can just wait till you're at a normal blood sugar, like for, for example, 85mg per deciliter is when you are definitely hungry.

And I guarantee you, if I were to measure my blood sugar right now, it would probably be around 85 because I haven't had breakfast. I have some coffee and I'm basically in ketosis and I'm probably around lower 80s right now, and I've worn a blood sugar monitor long enough to know what that feels like.

So the thing is, is that if I eat, I'm going to see my blood sugar go up. But as long as I maintain my blood sugar in a healthy range, I don't get this experience of like constant, you know, constant, like all this energy.

And then I'm tired. And this, this post-lunch fatigue is not something that I have felt in a long time. I because I have stopped eating the kind of carbohydrates that give me that kind of fatigue.

So I eat a largely low carb diet, higher protein because I am weightlifting right now, and that kind of diet really does work well for me. It's not for everybody.

I have vegan friends who are doing amazing on high carb diets and they are super. They are very, very, very, they're very slow oxidizers of carbohydrates, which means that they get this nice steady stream of carb carb metabolism.

I'm a fast oxidizer, which means I oxidize carbs like that. They just vaporize, and before I know it, I get this high blood sugar spike if I eat carbs.

Now, metabolism metabolisms change over time and it is very it is very common for for women's metabolisms and also almost everybody's metabolism to kind of slow down as I get older.

So as that happens, what I have found is that moving to a higher fat diet does give me that easy, steady blood sugar. And also I get ketones produced, and being in ketosis does make me feel like I have a much more calmer nervous system.

And for me it just works really well. Now it's I'm not saying that everybody needs to do this. It's not for everybody. The reality is, is that what most people need to do is to find a diet that they can consistently stick with.

That gives them a strong, sense of well-being after they eat a meal. I didn't have that when I was eating carbohydrates that were refined carbs. I was getting these spikes and drops and I was getting headaches and migraines.

Yep. And I used to be such a carb dominant metabolism that when I would skip meals, let's say I was at work and I didn't have time to eat lunch, I would get these massive migraines.

I haven't had that experience in so long because my body can now tap into fat supplies to to be used as fuel. Now, if you aren't metabolically flexible, you are going to eat carbs.

And then the moment that you skip a meal, the moment that you try to fast, you feel awful low blood sugar and low ketones. And that's what's called bonking.

And the athletic world. And so that is not a good place to be in either, because that will make you very tired and very, very irritable. And with the blood sugar levels and the insulin response that happens with the insulin that that is released, in order to send that glucose into the tissues, send them out of the bloodstream, is it as much the amount that the sugar levels drop then?

Or is it the rate at which the sugars are dropping too, that a person can start to feel bad? I would say that it's the difference between the spike and the drop that makes it so obvious to the physiology.

Bodies hate dramatic shifts, and they will constantly try to maintain homeostasis. So when the body feels that spike, the body goes, oh, shit. What? Whoa whoa whoa whoa.

I got all this fuel. I got to do something with it. And so it just says, okay, release the insulin, and an insulin comes out and it starts pushing the, it starts unlocking the doors.

And, like, putting the glucose into the cell. And, the problem is that there's a lot of people who are insulin resistant, which means that they don't have the luxury of having that go into the cell, because their cells are not opening the door with the insulin.

And so that is a huge, huge issue. And insulin resistance is caused by all sorts of things. It can cause be caused by vitamin D deficiency, hormone dysfunction, excess cortisol.

I was going to say stress. Stress is a huge cause. In fact, like I personally know that part of the reason why I have been metabolically inflexible the last few months and have had to remain in a low carb diet to maintain my blood sugar, is because my cortisol has been out of control because of this freaking Covid.

And the fact that we're in a Cold War and a civil war and riots and all these reasons to be, you know, I've been traveling quite a lot and there's just a lot of stress.

Metabolic Flexibility, Fasting, and Carb Tolerance

And the truth is, is that it's really hard to maintain insulin sensitivity and metabolic flexibility when you are in a state of your body having to be like, I need to maintain safety and security, like the first priority of your physiology is always going to be survival, and then it will be flourishing.

And so it's not surprising when you see people who are like, yeah, I'm trying to like reintroduce carbs, but I'm struggling because and you ask, well, it's something about your stress levels.

And the moment you get their stress levels back down, they start seeing the weight come off. And it's just like very, very common that there's this there's a deep, deep relationship between the brain and a sense of safety with the hypothalamic pituitary adrenal axis, which is its cortisol response to stress. Yep.

And I'm so glad you're bringing this up, because this is obviously very pertinent to everyone right now. And there's been a lot of people as well who have come in, talk to me about, hey, I'm trying to do this ketone diet, trying to be in ketosis.

And I like I feel like I'm bonking. I feel like I'm just I get into that and then a few hours later, my body feels like it's crashing. It feels depleted.

I'm, you know, reaching. I feel like I'm starving for carbohydrates. What is wrong? I've always been able to do this

before, and that's exactly what you're talking about, is this stress response.

And I have found as well that when a person is in this stress response, it depends on the amount of stress. Right? But any stress that that starts to reach to that line of, whoa, this is too much, this is overwhelming the body, the brain is going to switch that flip in terms of this is the survival response, which changes the whole metabolism when it comes to glucose.

It also changes the structure of mitochondria. So like the mitochondria have this quality control mechanism of fusion and fission. But the interesting thing that can happen in the mitochondria under severe stress is they will fuze with it instead of fuzing into this nice like network.

They'll fuze and they'll become these like they'll, they'll become these like like donut shape. And then they become like a blob. And the problem is that that is not a functioning mitochondria.

So you have to get the body back into homeostatic normalcy for their, for their, for their ability to actually properly metabolize their fuel supplies.

Because the body's going to be saying, look, I need I need glucose for my brain. I need it. Right. And, what I found is that it's it's always best to do slow changes over time.

And so rather than telling this person to go straight keto, what they would probably benefit from doing is just like, fast. It probably probably like just restricting specific types of carbs, like just focus on eliminating refined, refined sugar, you know, focus on eliminating, maybe a little bit of dairy.

Maybe dairy is causing a problem. Maybe, maybe look at your, food allergies and just focus on an elimination diet and, like, lower that inflammation level first, but don't maybe maybe don't choose ketosis first.

If your body is not responding because your body is not responding to something, you're either doing it wrong or your, or your you're not ready for it.

And the thing is, is that like building metabolic flexibility is is kind of like a gymnastics exercise. You don't just start doing gymnastics without training.

Right. And I have heard that way you are going to crash, right? And it happens all the time. So what people really should do is like slowly change and actually just focus on exercise, because if you're that stressed out, your body probably needs some exercise to work off that stress and gentle exercise.

Right? Exactly. Like maybe, maybe, and maybe, like start cutting a little bit of that caffeine excess, maybe focus on healing your adrenals. Maybe because when you're in adrenal fatigue, you definitely need to look at your carbohydrate consumption, because you may need actually to eat more often to get the body safety signals.

And the thing is, it's like you don't really know about your body's physiology until you try. And all I know is that if something isn't working, it's time to switch gears.

And track it so that you know, when you're making changes if that's actually helping or if that's not helping. I mean a lot of people really need to do is focus on the psychological pieces and focus on healing from trauma, focus on not the metabolism, but focus on what's underneath the metabolic disarray.

Why is this stress in your life? Where is it coming from? What can you do to remedy it? How can you ask for support? Because what really happens when the body starts breaking down?

It's usually because of this. There's a there's a demand. And that resources do not meet that demand is not meeting the demand. So you have to either do is increase your capacity which which by the way, exercise increases capacity or you have to lower your demands.

And if you can't lower your demands, then, you know, the reality is, is that like going into keto is not going to solve all your problems. And helping your body to be able to meet those demands, increasing the capacity involves all those things that you mentioned where you're needing to look at inflammation, you're needing to look at food sensitivities or needing to look at how wasted are your adrenal glands.

Because if those things are off, yeah, your body is not going to have the biological capacity to meet the demands of your life. Another thing that I want to add that I hadn't really thought about until very recently is I've been conceptualizing how to teach my students mitochondrial health, and the one thing that people don't totally get is that fat is an active organ, okay?

It is a functioning organ that makes hormones, is that makes that does all sorts of messengers. And the thing is, is that if you're metabolically inflexible and you have poor functioning mitochondria, what makes you think those mitochondria are going to be functioning to burn fat.

Right. Let's say it's like it's like if your house hasn't had power cut 50%, do you think that the appliances are going to work in the kitchen and do all the food processing?

No, the food is not going to be processed. It's going to it's going to the freezer is going to melt and the kitchen isn't going to work. So the way that I try to describe to people is you actually have to increase your bioenergetics capacity in order to start burning that fat.

And it's, it's it's a lot more than just changing the fuel supply. It's actually building the machinery to burn the fuel. And so what's kind of fascinating is things like cold exposure, like you can actually I mean, not everybody's going to go do this, but like bathing in an ice bath is going to start for forcing your fat to brown into, into white.

It's going to turn white carbon white fat to brown fat. But like, nobody's going to go do that because people don't want to do painful things. Like the last thing a person wants to do is painful stuff.

But like fasting, for example, like fasting is one of the better options for building metabolic flexibility. Even if all you're doing, which I found, this is like a really easy tactic.

It's just stop eating after 7 p.m., 6 p.m., and then don't start eating for 14 hours. Or even just start with 12 hours. Most people that I know who are really struggling with weight loss, who are obese, are still eating way too often, and one of the simplest things that they need to do is just shorten that eating window.

And I'm not saying go 18 hours, I'm not even saying 14 to even just 12 hours makes a difference. And to me, that's something that needs to be thought about is like, you don't and like step counts.

A lot of people aren't getting enough steps. Like, I didn't get enough steps yesterday. If I don't count my steps, I don't get enough steps. And so like even just increasing the number of steps that you can do can increase your metabolic flexibility.

It can increase the amount of functioning mitochondria that you have to burn the fat. So sometimes it's not thinking about the fuel. It's actually thinking about the conditions that that burn the fuel.

Yeah. And the mitochondria are right there at the center of the metabolism. And actually being able to convert any calories, whether that's carbohydrates or fat, into fuel.

And if they are losing their structure they're becoming these blobs. Right. Like they're not going to be efficient machines, efficient energy producing factories that we need.

And so we're going to have this metabolic imbalance that's going to affect everything else in our life, even down to our emotions and our thoughts and our energy.

I think it's also worth noting that the mitochondria are the regulators of the stress response. So they produce

cortisol, they take in cholesterol, they turn it into cortisol.

They also on the outside of the membrane, they have the enzymes that convert precursors to to catecholamines which are stress hormones. So they are actually regulating nutrition.

And they're regulating survival and reproduction and the stress response. And they also regulate the immune system. So they're like the seat of so many different processes.

And it's really, important that basically you you have to get yourself out of the cell.

Stress, Cortisol, and Mitochondrial Dysfunction

Danger response if you want to have healthy metabolism, because your body is going to direct all of your energy to protecting you and to. And what you don't realize is that the body's protective mechanism is weight gain, because weight gain is is a fuel supply that if you were to starve, you would be able to survive because you'd make it.

If you were completely starving, you would be forced into ketosis by burning your fat. So the body is constantly going to hoard food and stored fat if it feels like it's in danger.

And I personally was really passionate about metabolism and like showing people about blood sugar and making everybody like it fight heart disease. But then I realized what's underneath everybody's obesity is unresolved cycle, logical trauma.

It's unresolved emotions. It's unresolved childhood adverse childhood experiences. It's unresolved work stress. It's unresolved family stress. It's unresolved psychosocial stress.

It's unresolved relationship stress. And like most of people's weight, is a reflection of unresolved emotions. And until people really deal with those emotions and deal with their grief and deal with their traumas, they're never going to lose the weight.

And when I realized that, that's when I became actually very passionate about psychedelic medicine, because I'm pretty sure that this is the future of psychiatry, and there's not enough psychiatrist trained in psychedelic medicine to actually deliver this.

So I'm on the forefront of this movement because I really think that it's about healing our stress response and healing our trauma. That's going to lead to us changing the way that we feed ourselves.

And we also need to heal this food system because frankly, the food system is impoverishing people. The fact that Travis Scott is selling African-Americans and Hispanics and people who are underserved, people that are impoverished, populations that are needing better food, that they're taking advantage of these, these, these people's, mindset around what is what is cool.

And they're selling them Happy Meals that are making them sick and they're keeping them sick. Exactly. Keeping them in the position. It's it's an absolute disgrace.

And McDonald's should be ashamed of itself. And there is not a single meal in McDonald's that is worth eating. And we need to challenge the food system to start producing healthier food, because what they're serving people is putting people in the position of not being able to let themselves up out of poverty.

And I don't think it's fair that people can't afford healthy food in America. Right. And then they put these meals on sale on a special and entice them even more with.

But yet that's the very thing that's keeping them stuck in their position. Like they're not going to be able to feel well, they're not going to be able to think, well, they're not gonna be able to make good decisions.

They're going to be stuck in this cell. Danger response. Because of all the information that it's causing. Yeah. And that information does send the stress response to the body like inflammation in the gut is inflammation in the brain.

And inflation in the brain is a is a an alert system. People don't realize that inflammation is a body's alert system. Pain is the body's alert system.

Depression is the body's alert. It's a signal signal system that like it's adapt. These are adaptive responses. And so the problem is, is that we're not looking at them that way.

We're looking at them as a problem. But the problem is not the body problem is the conditions around the body that are forcing it into this place of like, what is wrong?

Why am I so sick? Why do I feel this bad? Yep. Well, we need to talk more, doctor Molly, because I've been doing trauma therapy for years. But over the last few years, what I've realized is so much of it depends on the mitochondria.

So much of it depends on. Oh, my God, I want to talk more about that. What do I know? So I'm actually working with Quicksilver Scientific right now on actually developing a protocol for like what?

What supplements. What are the necessary, like toxin binders because as we do trauma therapy, trauma being released much, it is so much like it is so rich.

I'm getting so excited about this because there is so much that we can do to actually support the biology of what's going on. God, I want to partner with you to be to maximize a person's results and accelerate them getting those results and results that are going to last.

Right? Because I'm sure that people who, you know, go to therapy, go to a talk therapist and are still there five years later, kind of still talking about the same topics, maybe different situations, but this exact same theme, and we're not getting lasting results.

And so, yes, like we need a big reformation in trauma work and bring it to medicine because that's really where it is. It is in the biology and this cell danger response.

And until we can actually shift that, a person is going to get stuck in the same patterns and wiring that their nervous system developed to survive in the first place.

No, I know, and we got to do that. We got to talk. So that's another thing that's worth talking about is neuroplasticity, right? Yes. Thank you. In order for neuroplasticity to happen, you have to have the energy to actually produce new neural networks.

And you have traits and you have to have the healthy fats to to build those new neural neurons. And then you also have to have the right directions, right.

So you have to have integration and you have to have the right signals. So it's like signals. You have to have the map. You have to have the substrates, you have to have the energy.

And if you don't have the signal from movement you're not. It's actually doing studies on ketamine. This is a therapy and psilocybin assisted therapy in context of, exercise in order to get these brain sprouts.

And I've been using this, this sort of, protocol in my practice where I focus on lifestyle, like a lifestyle that optimizes mitochondrial function, combined with, spasticity agents, CBD and and and ketamine.

And then with that, you can actually see a person pull themselves out of, Yes. And this is into what is magic. And I've had clients who are suicidal. Yeah.

We're dealing with grief because their, their partners had died from cancer. I've had more than one patient whose partner died from cancer, and they were basically suicidal and dealing with serious, bad, serious grief.

And when I was able to help them through psychedelic medicine and, so specifically sublingual ketamine assisted therapy, plus lifestyle, plus the psychotherapy, they were they are now flourishing.

And that is like the most rewarding work that can be done. And we know that there is a massive wave of PTSD coming in. Yes.

Trauma, Neuroplasticity, and Psychedelic Medicine

Practitioners like physicians and also all the nurses and all the support staff that we've had, we've had so much death in this in this last year. There are so many people that are going to need this medicine.

And we and it can't just be therapy. It can't just be drugs and therapy. It has to be the physiology, too. And I'm so glad to hear that you and Quicksilver are working together, because frankly, I don't know what I would have done in the last six months without Quiksilver, glutathione and Quiksilver.

Vitamin C, right? I have found those those have been like lifesavers. So that company is like it's such a good company, such good quality. Yes. They are a sponsor of this summit.

And so I am very grateful for them for that. And yes, had a wonderful interview with Doctor Shade the other day, talking about all this as well. And I did not know that we had this in common, that we both use the sublingual ketamine in order to really make these shifts.

And yeah, like you say, like there needs to be a baseline, a baseline there. Because if you don't have that baseline and you add ketamine, you're going to overwhelm the system.

But yeah, along with everything else that you're doing to support that, and then you do things that are really going to increase and promote like your body enough, right?

Like that brain derived neurotrophic factor. Yes. That really promotes and enhances the neuroplasticity. And there's so much shift that can happen in a relatively short amount of time.

With this right? Support. Yeah, I love that. And I think it's really important to know that, you know, these medicines aren't perfect right now. Ketamine is like the best thing we've got, but it has side effects.

It has toxicity. When you actually do kind of need to like detox. After you do, can I recommend and Acetylcysteine definitely for people because it is it can cause damage to the body if you if you abuse it I that's why I don't recommend very very frequent sessions.

But I cannot wait for us to jam on this because frankly, like this is I just got off of another zoom call with, a venture fund that we were we were recently talking about the future of psychedelics.

And, you know, it's doctors like us that are just like, look, we're going to pioneer this right now because it's what's available. But we need a legion of doctors to save this country from its stress and trauma, because otherwise I don't know what we're going to do as a as I mean, everybody's going to be on mood medications and at a van for like very well.

They just don't work well. And we don't we know that that often leads to we know that, you know, a lot of these drugs and a lot of these drugs lead to dementia, right?

We don't want more dementia. We don't want more brain damage. And we certainly don't want drugs that don't work very well. Right. Like we want things that work and are effective and that don't need to be taken forever.

The whole goal of medicine should not be that you are managed for the rest of your life, but that you become autonomous and then you become independent of the healthcare system because you are so healthy that you don't need it.

Like that's the goal is that you are you're flourishing and that you're, you know, like, I don't know. I mean, I definitely have a lot of strong opinions about this, but I'm just good that there's another doctor.

I mean, I will have to invite you. There's a Google. I don't know if you're in the same Google group as I'm in, but there's a group of, ketamine assisted therapist doctors, and we all shared science and white papers and knowledge and case reports and protocols.

And like I will happily add that to add you to the group, because it's one of the best sources of knowledge that I have. Awesome. Yes. Thank you. And yeah, one of my one of my biggest concerns about these medications that people are being put on is they directly target the mitochondria and are like a toxin to the mitochondria, like the very thing that we need to optimize, they are hindering and compromising.

And so then when the biotics right, when when a person gets the point where like, okay, you know, like maybe I'm a year or two out from Covid or, you know, whatever situation that caused all the stress and the depression and the anxiety, and they want to get off their medications because of the compromises that it has caused of their biology and how it's changed their homeostasis.

They have such a hard time getting off and and it's yeah, it needs to change because especially I think with Covid, there's a lot of people who realize that they don't want to be dependent on a health care system for medications, because what if something happens?

What if the supply delivery like there's supply, right? I know China has produces most of these drugs right at that. I mean, basically like China could cut us off and we do not have the reserve supplies.

I mean, India might be able to provide us with some, but we're we do the best. The best thing for your long term health is to not have to depend on 15.

Damn that dependent live right. You know that's not health. That's. No, it's not up. But it really does take like very intentional and targeted, optimization, tracking and monitoring to even know how to shift from wherever you are to, to the next level.

Right. And make the breakthroughs. Yeah, I mean, I, I put heart rate variability monitors on my clients because I have found that the, the information you get from just knowing what your sources of stress are so profound.

Like I had a client who had chronic chronic food allergies, and then she was a kid. And it turns out that we were able to like when I really took her history, I discovered that it was her childhood association with food that really had led her into this place of feeling really, like food was something to be feared because she had this horrible eczema outbreaks as a child.

And so the food was so fearsome for her. It was it was such a terrifying experience. She didn't know what was going to cause her skin to weep and crack.

And so when we put this glucose, we put this, this, hrb monitor, on her, we were able to show that when she would go to the kitchen, she would have a serious stress response.

And so as we work together with ketamine assisted therapy and, and, like, working on her diet, trying to figure out what, what she could do to start reintroducing certain foods, she slowly improved her food sensitivities and was able to, you know, develop a better relationship with food that led to, a reduction of her allergies.

And, you know, it's really getting down to the root of of a person's pain and really being able to have that, that inner child be seen and be cared for and held.

And I wasn't just obviously me, it was her therapist I had her working with. It was her own work. It was her own self-discovery. But man, it's like my clients who finally hit this wall and realized, wow, it's the fact that I had that experience as a kid that I didn't.

I wasn't able to really, you know, process this part of my life. Like when they finally face and move through their trauma, they start to they start to get better.

Right. And what it awful position for the body to be in where food is necessary. And yet rather than seeing it as something nourishing, it was seen as a threat.

Yeah. And the stress response that was happening because of that. Yeah, yeah. Looking back on my own health, I would say that the two things that changed my, my way of optimizing the most would be tracking my heart rate variability and my sugar think.

I'm so glad to hear that, because this is I mean, this is this is becoming sort of the cornerstone of my practice is like when you track the three leading drivers of mitochondrial dysfunction, which is inactivity, too much stress and, and the wrong foods at the wrong time, at the wrong amounts causing blood sugar.

So blood sugar basically. And by the way, by tracking movement, you're also tracking sleep typically with these wearables. So you have to look at and like sleep is intimately tied to stress, right.

Like if you don't sleep well your stress is going to be high. So like I kind of put sleep is like sleep is really under the stress response because like it's it's literally if you don't recover you're going to have stress.

So it's like so basically if you don't track these metrics then you're not really knowing what your lifestyle is doing to your health. And so I've just started putting these things on everybody and I, and it's so interesting when you ask a person, all right, what's your HIV, what's your blood sugar?

And they don't know that they're not healthy. And then you show them how to become healthier through these metrics. It's really about it is. And with the HIV, it's been interesting to see the insights that people will have, where they will come back and they will say, I didn't realize that this person was causing me this much stress.

I didn't realize, I did not realize how much my work was actually causing me stress. And and now you have this information, right? You're tracking it. You have the information.

Now you can figure out what your options are, what you can do about it, how you can meet those stress so that they don't continue to be stressors in your life.

Exactly. You know, I mean, it's just it's it's what people need to do is to have some insight into what's really going on in their bodies so that they can learn what this feels like without having these sensors.

Right. You can also see stress and blood sugar responses. You can see a person's blood sugar go haywire. And, you know, a lot of glycemic variability if they are highly stressed out.

So let's swing back around to the mitochondria. And you mentioned the three performance trainers for the mitochondria. And we haven't talked in detail about fasting for people who are more interested in fasting.

And what would actually be helpful. You mentioned that they should start with just, you know, doing the 12 hours overnight. Is this is this what you would call it?

I mean, I would say it's about a it's a graduated response to fasting. And so the way is you slowly start training your body to become more metabolically flexible.

And so the first thing I like to do is just help people with the sugar cleanse. I mean, really like focusing on like, let's talk about sugar. Let's think about sugar in your life and then move from, you know, sometimes it's replacing sugar

with substitutes, sometimes it's going cold turkey.

Sometimes it is challenging yourself to shift, but really just trying to like, examine where all the sources of sugar in your life. And then from there start thinking through.

Okay, so like maybe I don't need to eat so late at night, maybe I can, like, discipline myself to stop eating at 8 p.m.

Tracking Biomarkers and Closing the Summit

and then and, and, you know, maybe I can drink my, you drink my coffee in the morning after 12 hours instead of, you know, having it first thing. And maybe it's like just cutting the sugar out of the coffee.

And so for some people, it's like, let them have their cream in their coffee first. If it means that they're able to consistently do the fast. I'm really not about I'm more about like, what can you achieve that's easy and small that you feel you want and then moving on to harder things because like BJ Fogg, it does this really well.

It's like if you give someone a challenge that's too hard, they have to be really motivated to change in order to actually succeed. But if you not super motivated, you got to give them easy things to do.

And not everybody is super motivated, especially during really high, high stress times. So like I stopped fasting as much during, during Covid because frankly, my stress levels were like, I need safety.

Yeah. But now that I deal with fasting. Yeah. And now that I'm feeling better, I at least try to do 12 to 14 hours. And then on a good day, when I'm really feeling confident that I can go longer or I'll go to like, you know, 18 hours or so.

And like today I had, I think I've eaten. I had a little bit of coffee at the shop called Strong Coffee, which does have calories, and I kind of what's, what's called a fat fast.

I did I've eaten a little bit of fat this morning, but I haven't eaten like a solid meal yet. Just because I didn't have time to prepare one. And I'm going to start one.

I'll probably have one after this call, which is hopefully, I don't know when we're ending, but fairly soon, probably. And I'll go eat something and then I'll have.

I wasn't really aiming to do is eat about two meals a day. Plus, if I really need one, I'll have a snack. But as I'm starting to want to lean out again after, you know, putting on maybe 5 pounds during Covid, which partially is muscle because I have been lifting, I would like to lean out a little bit over the next few weeks and I am going to be like, you know, starting to close my window or make my window a little bit shorter and adding a few, 24 hour fast to my month.

That takes practice to work up to. You really should start challenging yourself with slow change over time because the body likes to adapt slowly. It doesn't like dramatic stuff.

Plenty of people with high motivation will do the hard things, but that's the minority. Most people don't have high motivation and so they will do the easy things.

And the easy thing is, what's the thing that's best is what's consistently done. And so if you can consistently fast for 12 hours, that's better than never fasting at all.

If you can. This fast for 14 hours, that's better than like never doing it at all. Like it's all about what you can consistently do to feel good. By the way, you want to start feeling good.

Like, I feel pretty energized right now and my brain feels really clear. And one of the benefits to fasting is that you actually do get sharper, like, you know, but you really do need to temper it with your your, your HPA axis.

Like, I had a a patient who was bodybuilding and was overtrained and I was like, what I really want you to do is actually train less and like, don't fast more back down.

I want you to back down on all the stressors and you start losing weight. And it's like, well, your stress cup was too filled. You need to empty your stress cup and give your body a little bit of a break and you're going to see your body stop going into stress, work stress, reaction mode.

Yeah, I love that you tailor it to their stress because that really is the crux of it, especially when we're talking about mitochondria. A person's motivation level is all related to their mitochondria too, right?

Because if their mitochondria don't feel like they have any more energy, then their motivation to do bigger changes is not going to be there. It's going to their motivation matches their mitochondria energy production totally good.

Well, yes. I'm not going to keep you any longer. I want you to be able to go eat and stabilize blood sugar levels. I really appreciate you taking the time today.

And it's been really nice to connect with you, doctor Molly. Yeah, same. It's just a pleasure getting to know you. And I can't wait to talk with you more about the future of medicine.

And so just keep me in mind for any future summits. And if anybody wants to find me online. Doctor Mollycoddle. Dr. LeEco, is my website. And at Doctor Mollycoddle is on Instagram and then LinkedIn.

I'm pretty active there. I'm on Twitter at Molly Maloof md.com or sorry, and Molly Maloof, MD. And yeah. So there you go. Yes. And I really encourage everyone listening to look up Doctor Molly.

She really is at the frontier. She's a pioneer in personalized medicine, as you can tell from talking with her today. And so what she's doing is what I would highly encourage you to consider doing for your own health as well, and tracking it and optimizing it.

And thank you guys, and thank you for joining us today. Make sure and get the discount price for the summit recordings and the content while it lasts, because once that discount price is gone, it is gone forever.

And I would just love to connect with you guys, get to know you better and together. Let's find that next level of health and aliveness.