Introduction to glucose optimization

All right. So you probably have everybody thinks glucose optimization is just diet, don't eat sugar, etc. but as you know, even better than me, what about stress factors?

What about if you're doing intermittent fasting and it doesn't actually work for your body? What about the menstrual cycle when it's that time of the month?

What about the temperature? What about the air quality in your house? What about insulin? Inflammatory foods? Even if you don't eat a lot of carbs and you eat a little bit of broccoli or something that your gut, your acid and your stomach acids are for, your microbiome destroyed.

And that's inflammation that's gonna show. If you're overwhelmed with chronic health symptoms and still don't have answers, you're not alone. I'm Doctor Javon and on Redefining Wellness with Doctor Javon will be exploring root causes like Lyme disease, mold, and parasites, and don't guide you with simple and practical steps towards a real healing.

All right, so today I am here with Boris and he's become a good friend. He is the tech guy. We've talked about all kinds of things from how you get data about your body.

He's got a company that is specialized into right now, constant glucose monitoring. And the difference is, is it's the platform, it's the tech. It's the all the pieces of how you're doing things that make it so much different.

But today I wanted to start off with talking about the future of health tech. Yeah, amazing topic and thanks for having me. I think when people think of the future, there's just no way to go back now.

And what I mean by that is we even now have real time data on our bodies. We have so much analytics for everything else, but our bodies have always been a mess. Right?

And people knock on me sometimes and like point in time tests are not that great. And the reason is you got to keep doing them consistently and then experimenting.

So it's like a lot can happen in three months, right? But realistically, your decisions that you're making day to day or even minute by minute are the things that are going to influence your health.

Future of personalized health tech

And so if you have an insight on what your body's doing currently and you can make an informed decision or have somebody assist you to make a decision like a practitioner or care plan, then you can actually make decisions minute by minute instead of three months by three months.

And so the way I look at health is you're just making decisions. And the faster you can make the right decisions, the faster your health is going to get on track.

And or if it's good, be even more optimized. Right. And so I think the the future of health will be we have our data on our body like we do any other analytic software.

You know, here's how your liver is performing. Here's how your heart is performing, here's how everything's going. And then what are you supposed to do with that? Data will be prompted to you and the technology will be able to learn off of you.

I think the big thing is we need practitioners to give that insight and those care plans and shape that technology, because I think alone it's not going to be able to do that.

There's too many variables and there's too many things that our practitioner knows that like an AI or a tech won't know unless it's getting like billions and billions of data points on that person, but they need to live long enough for them to get that.

So that's where we're at. I think the future is really going to be very, very personalized. It's going to go away from hypotheses or what we think is best, and it's going to be driven by what's actually going on and what result are we getting.

Yeah, I fully agree. You know, I've been watching that I'm getting get myself data clients are bringing in and you give somebody a constant glucose monitor.

So for those listening this is something you can just put in the back of your arm. And it's reading your blood glucose in real time. So you say you go to a friend's house and you're eating dinner and you're like, it's a healthy dinner.

Eight steak and vegetables. My blood sugar shouldn't be spiking, but yet you live there and you see your blood sugar spike and you go, what's going on? And it's going to rise some.

But I'm talking about we go on a spike. We're like, way out of the range. Doesn't make any sense. And you go, what's happening? Well, blood sugar can spike during stress is something I'm always talking about.

Is did the house have mold? Was the conversation at dinner a little stressful? You know what was going on around that time period that would affect your body from a hormonal perspective, not just blood sugar.

So having real time data can help you, but it also can tell you things like, maybe your body doesn't like broccoli and that's what you ate that night.

I've had I got a client right now that came in and she started having some really high blood sugar markers. She went in just for a regular blood marker, and it was 360 under fasting blood sugar.

And that's completely unacceptable. We're looking at medication at this point. If you're going to be that high often. And she was adamantly against medication, I said, well, you know, if you're going to look at some other options, you need to have a glucose monitor on immediately.

Yeah. And we got that on her. And she was able to see in real time the marks markers coming down. But she started noticing that there were certain blood sugars, safe foods that weren't safe for her.

Yeah. So by understanding this she actually started seeing blood sugar coming down. Whereas when she was eating those foods, we weren't seeing any progress, which was driving us even closer to, okay, medication is no longer an option.

But because she had this knowledge, because she had this information from her arm, she was able to make decisions and honestly just take her own health by the reins and control it and do what she wanted to be able to do to reach her goal of getting blood sugar back within range.

And and now, after a few weeks, she's gone from 360 to a high blood sugar of about one 7186. Huge. And getting some marks back down into the 90 range.

So still not where we want to be. Yeah, but massive strides forward. Her GPS is thrilled with the progress and not going to force insulin right now like I thought might be happening.

Yeah. No it's a it's a great point right. So blood sugar itself like regulating that is amazing right. And I think the the point you're making is how do you contextualize that biomarker to what you're doing.

Right. And so it's like if you just have blood sugar readings, nobody cares other than a physician looking at the data and then trying to interpret it.

But like a regular person just wants to know what good or bad it was. What I did was it was that good for me, it was that bad for me. And then the next time, how do I adjust that? Right.

CGMs and real-time biomarker insights

That's the only inputs they really want. Everyone's busy. Everyone wants to do something else. Everyone wants them them to do it for you. And so that's that's the beauty of I think software and technology is it's going to go more and more of don't even worry about what the biomarkers are.

Here's just the things to do. And then you're just doing great. And that's the that's the only way the technology gets adopted. Because if the person has to understand the markers and study it, they're not going to do that.

You know, maybe biohackers like that are really into their health, are going to do that, but the general populace will never do that, you know. So, yeah, it's a that's the beauty of it all.

Yeah. I've seen that for sure. You know, I get people that come in and I always tell them I go, there's gonna be a few points during the time that we're working together.

They're going to be crucial. One, you got to adopt the things that we started with here at the beginning. You've got to adopt the changes that we're talking about doing based off of the initial laboratory test, which is like yours.

And it's a one time you run it and then you're not going to run it for months again. Yeah, but you've got to adopt these things. The second time is when you start seeing results enough that your health has reached a point where it's not crippling to you anymore.

You're able to do the things that you enjoy doing and get back on your feet, and you feel some freedom. A lot of times the drive starts to wane. And I mean, these are people that are extremely motivated.

The drive starts to wane and it's normal. It is normal. You're like, I have been able to do what I wanted for a long period of time. I'm starting to fall off the horse a little bit.

I go getting back on. Yeah, and maybe we tweak the program to. It's a little easier, but you've got to get back on track. Keep going. And then finally, the last point really is how do you stay doing enough good to feel well long term.

So we don't come back to the point that brought you in. And sometimes there's something that brought you the crash, your health and the initial. But so often there's a lot of lifestyle pieces that that weaken the person.

And even even myself wearing a, you know, biodata tracker of different sorts, whether it's a constant glucose monitor or a CGM or a or or a ring or a loop.

There's all this technology out there and it's really fun for a while. So fun to track, so fun to see, so fun to keep up with after a while. But, and if you can make it simple, and for me, being on the back of my arm.

Yeah, I forget about the bio trackers. I love it on my arm. If you put it on my hands or my wrist. Yeah. Can't stand it. You get annoyed by it. Don't want to wear it. Don't want to wear it in a gym.

It hurts my hands in the gym. Yeah, if it's on my ring fingers. So I've really enjoyed back there. Yeah, I think it's a great point because everybody loses motivation.

So you have to constantly remind them to be motivated. Right. And I think that's where a lot of people miss. It's like you're just giving data and it's exciting when you're sick and you're getting better because you're like, oh, there's a

win, there's a win, there's a win.

There's what? Eventually you get to a point where you're like, I'm actually pretty good. And then you get a little cocky, and this is where all the bad habits come back.

So I think it is important in technology to build feedback loops and motivational loops to get people like, I think video games do this the best. They just have dopamine loops, right?

So like Candy crush, which is just like dopamine. Like dopamine. You like, you know what I mean? And it's like you blew up billions of dollars because it was just like dopamine doing.

And it was like the first of its kind. And the whole point of a video game is to keep you playing the video game longer, and they're like, experts at doing this.

And I was like, we need if that's what everybody else is facing with other technology. And like TV, dopamine, like every episode is an open loop, right?

Hey, next episode, find out why this guy killed this guy. Okay, I need to watch this. Right? But nobody does that with their health. So it's like, here's your health data, and now you measure it the way you want.

No, it's never going to work. If somebody is getting healthier, we should actually make it harder for them to score better because we want to keep them motivated.

Right. And like there's Type-A personalities where we're like, we can't ever, you know, never actually want to give them a perfect score because then they're like, on this shit, they'll always chase perfection.

And I'm not saying that's healthy, right? There's like ethical ways to do this, but that's the like that's the biggest key. And I think you know this better than anybody because you run medical programs and you run health programs.

Right. And I'm sure you see this all the time where people fall off the program as soon as they think, oh, now I'm Superman, I'm healed or whatever. You're like, no, because you're going to go back to doing the bad things.

You put yourself in environments and you haven't taken yourself out of those environments that got you sick. So you listen to gaming for a while, but now you're going to go back to it.

So it's like, and now we haven't figured this out either, right? But that's something I'm always front and center with, with the team and other technology companies I talk to.

Like, how do we get people to do this right? Like it needs a village to do it. And it's it is hard, but it's necessary. So you talked about other companies, your company.

Yeah. What are some advances in these these wearables, these biomarker trackers that are, that are coming down the path because it's exciting all the time when okay, now we can just stick something in the back of our arm.

We can put a device on our wrist. You can see your perspiration rate, your blood sugar, your oxygen saturation. What are advancements coming? We're going to do make things better.

Wearable motivation and adherence

There's a couple that I really like. So we're talking to a lot of companies that are doing noninvasive solutions for like glucose readings. Essentially, it'd be a patch you put on.

You can take the patch off and then recharge it, because right now the glucose monitors you put on it do person scans a small filament and they have a half life, right?

They essentially stop reading the data correctly so they turn off for safety issues. I think that's going to be a game changer because going to bring down costs, it's going to be something you can recharge.

So it's going to be easier to just reuse that. Outside of that there's already companies working on always ketone monitors, always lipid level readings, stuff like that.

I think if we're going to go all the way, the most exciting to me thing to me would be nano nano readers inside your body. Now we're getting like way out there and people would be like, oh no, I don't want that.

But I think if you put it in the context of imagine you had nanobots inside your body that heal cells whenever they're needed, you could technically, hypothetically get to perfect health at all times without worrying about it.

Right? And all of that data could get streamed to a software and tell you what's going on. And now you actually have analytics, like you were in a car or a computer or a phone on your body.

Now I don't the nanotechnology already exists and is being experimented with for the last 5 to 10 years. So I think this is like way too early stage, but I think the actual like noninvasive patches was multiple two and one's three and one readings are going to be the next generation of sensors.

And I do think a lot of this is going to come down to like lab reports at some point, not be needed because you're getting all of this through real time data and you can track trend lines, etc.

I don't think labs will ever go away by any means necessarily. I could be wrong, but I think they will be greatly diminished at some point because trend line data is just going to be more useful than point in time data.

Yeah, I'm I can definitely see it. And within my own practice. Yeah. You get your initials, you get a good idea of standard health where you're trying to go.

And then it's point in time data once you have enough of it. Yeah. You just roll with that for a long period of time. Yeah. As long as symptoms, everything else follow.

Yeah. Unless you're dealing with of course like a cancer or something that we've got to check a lot more often. But if it's metabolic health point in time, data is already starting to overcome a lot of the well, sorry, trend line data is already overcoming a lot of the point in time data.

Yeah. When do you think these that these noninvasive patches are coming out? Is there is there anybody beta testing them out there yet? I talked to multiple companies about this.

They all want to integrate with us and work with us. And they always promise me the world. And next month. And so every month is the next month. I think everybody greatly underestimates how long it takes through the FDA process.

So when they tell me they're in FDA approvals, I immediately know this could be three months, six months, six years or ten years or 20 years. It's not a black and white thing.

You there is a ways around it. There's there's this clause. I forgot the exact name, but it's if you come up with a product that's similar to a product in the market, you can kind of expedite FDA approvals.

This has been notoriously used and probably abused by pharmaceuticals. They're like, we're like this drug but just a little bit different. Right. And so then the FDA is like, okay, we understand the risk profile of this.

And so therefore we can get you in quicker. I'm not saying like this is like a the next day or something like I'm not billions of dollars of clinical trials, but those things are in place and everyone's trying to utilize those policies in place.

But that's not how the FDA works, right? So they're still going to do their due diligence. They're still going to make sure it's aboveboard. I think the big companies, you know, like Abbott and Dexcom, now that they are putting a ton of money to get the FDA to approve this type of technology, it's making it easier for others.

But it doesn't mean that those companies can just ride those coattails and assume they're going to get to market fast, because I'm like, if those companies took a long time and still take a long time, I don't think you with less money are going to be able to come in and say, our R&D is better and our clinical trials are better.

So I'm very hopeful and I and I do think it's a very slow and then explosion. Right. So just like with glucose monitor it like super slow. And they sucked.

They were around ten years ago but it was like $20,000 to have one. And it lasted like, you know, three days or something. Right. So it was like the the cost structure had to come down and the efficacy had to go up, and the application of it and the ease of use of it had to get to a point where now literally we can get it on anybody.

And that's a huge breakthrough for humanity. We've never been able to get in the body like this and get trend lines real time in the history of humanity, right?

Next-generation sensors and FDA hurdles

So it was a huge breakthrough. And I, I think, you know, there's like 30, 50, 60 startups working on sensors to get to market. I think until one of them really breaks through and is approved and like goes to the market and has distribution and its users like at that point we'll have a lot more.

So we're really banking on that happening in the next two, three, 4 or 5 years. I don't know exactly, but I'm hopeful. What's intriguing and I'm just curious like why?

Why did they have to go through so much FDA rigor for something that's not inside the body? Is it just because they're making claims of reading blood sugar?

Yeah. So it's the accuracy, right? So if you're like, hey, this put this patch on, we'll get you real time glucose data. Even if you say that it's we're just showing trend lines and it's for education purposes, the accuracy can't be zero because then you can just have knockoffs and pretend, you know, there's already.

Yeah, there's these watches. They get advertised and banned on TikTok. I hear about it all the time. It's like, hey, monitor your glucose through like a tape band or like a watch.

It's like Chinese garbage. There hasn't, like, this completely wrong readings. So those guys get banned completely, right? Because people are still making lifestyle decisions and there's implications to health there.

And so therefore it's harder to you know, the technology hasn't been proven with a patch essentially what the companies are doing is they're using the the real glucose monitors that are in market right now that like we do, that have accuracy in clinical trials up to like 96, 97 percentile, like really accurate.

And they're trying to train AI to take that data from this monitor and train their patch and say that we can read light, moisture, blood pressure and temperature on the skin to be able to get an accurate reading of inside the body readings.

And I think that's a great idea. And then as somebody who likes innovation, I think it's genius. But the accuracy, if it's not there is never something I would adopt because, you know, like if you're a physician making decisions on this data, you have to be accurate, right?

I think that's like baseline baseline. Absolutely. Yeah. Well we're talking through how to use trend line data. And I know you have thousands of cases.

Yeah. That's you've had a run through your company. What are some of the I don't know the the things that you're seeing people able to help with or some of the things that you're learning about that are shortening the length of I want to feel better at this technology, I feel better.

So yeah, getting over the hump. What are you seeing? It's a great question because our what we call our Northstar metric for consumer is not providers.

A zero Jaha moment. Like how fast can we get them to a moment where they're like, oh, I had no idea. Like I thought this was healthy and it's not. And as soon as we know we get we got that moment, we know that they're at least excited for a little while to keep improving.

We've seen a lot of edge cases that I they're not even edge cases, just cases I didn't think about. So you actually mentioned this earlier, which was like mold stuff like that.

We had this women. There was nothing wrong. Like her diet was perfect. She was regular practitioner from a very reputable company. She called me up like, I have no idea what is going on with this woman.

Like, her glucose is going like crazy certain times of the day. It's not like she's eating anything. Or if she's eating it, it's a normal meal she eats at other times a day, so we can't really correlate it.

And it just so happened that she was going to the second floor of her house, and that's when her body was going into chaos and her metabolism going into chaos and into the first story ever.

House. It wasn't. So we through digging, we found that there's mold. And the second story of her house and her body was responding like crazy. I'm going to do a caveat here.

I don't think everybody's body respond as badly to this mold, but hers dead. And we caught that and therefore she got rid of the mold. Now she goes up to the second floor and there's no issue.

Right. And so these are like the things that we're now starting to correlate is we can catch whatever the input is that's making the metabolism go crazy when other things fail. All right.

So you probably have everybody thinks glucose optimization is just diet, don't eat sugar, etc. but as you know, even better than me, what about stress factors?

What about if you're doing intermittent fasting and it doesn't actually work for your body? What about the menstrual cycle when it's that time of the month?

What about the temperature? What about the air quality in your house? What about insulin? Inflammatory foods? Even if you don't eat a lot of carbs and you eat a little bit of broccoli or something that your gut, your acid and your stomach acids are for, your microbiome destroyed.

And that's inflammation that's going to show, you know, your your body produces sugar as a way to make energy to fight something off as well. So there's all these cases now coming up that we're correlating and going, oh, we can actually catch these things.

Using trend data in clinical practice

Even with glucose as the main biomarker, which has been very empowering and to kind of loop it all back, I think the biggest thing is you can catch all of these things, but way faster now, right?

Like instead of waiting three months and doing like I used to do elimination diets. And when I did the math, this is the most nerdy thing ever. I was like, I have to live to like 800 years to do, like every variable of elimination and then reintroduction to that.

Get every combo of, okay, don't do cheese and then gluten and you know what I mean? It was just like there was so much time I would have to keep testing.

So you just do best guesses and and see how it goes. But now you don't you don't have to wait as long. You can get that feedback loop immediately. Yeah.

You know, I'm I'm sitting here thinking through something I do with clients all the time is we're bringing in a new supplement. Yeah, a new lifestyle change.

We're I'm asking questions like, are you feeling better or feeling worse? And sometimes, like, I can't really tell. I feel so bad all the time. Yeah. Adding in biomarkers that you're testing real time all the time.

And if you had a week or two of these biomarkers already in their body, now you add a new supplement and you're like, oh, well, it did stress your body, right?

I don't have to ask you the question. I can just simply look over here. Yeah, exactly. I'm still going to ask the question, of course, but I can see the data.

So if you're confused, maybe your body's not as confused, even though your symptoms are already horrible all the time. Yeah, I can actually see the changes and.

No. Yes. No. Maybe on different interventions. So now I'm over your planning, like okay, how do I bring these things to my clinic for other people. Totally.

Yeah, I think I mean, that was one of the biggest, one of the biggest concerns I had with working with providers was I know how busy you are. And I'm like, even if you like something, if it's more work, you're probably not going to adopt it.

And so we always are trying to think through if we're going to partner with a clinic or a clinician, how do we take away that work? And so one of the big benefits of this tech was let's build it so that we can automate the insights you're going to ask for anyway.

So if you're sitting with a patient and you're like, how did you sleep? How did you eat? How did you which you'd ask anyway, if I can just give you that and you can go into the meeting and go, you didn't sleep very well.

Your diet, it's always terrible on Wednesdays because you go out with Susie or whatever it is. And that was another use case we saw was people would have terrible glucose when they were with people that, like, made them anxious or nervous.

And we were starting to catch that. And they're like, you know, I'm not going to tell you to tell your patient not to hang out with these people. But that's what's happening, right?

So the, what I like to say, parasites don't just have to be worms inside. That's right. They can also be people that steal your energy. Yeah, that's a good one. I like that.

So, I mean, I talk to people all the time, like, look, we're we're looking for anything that's right. Of your body. Yeah. Whether it's air, food, water, hygiene, dental work, people, barometric pressure, whatever it is, we're looking for those stressors.

Yeah, so that if we can reduce enough of them, then your body simply has more energy to operate better. Yeah. Now, if you have four kids and one's young and keeps waking up and you're not sleeping, not getting rid of the kid, but what we might be able to do is decrease something else, like using parabens or phthalates.

Yeah, from shampoos. Or maybe it's on Tuesday when you clean the bathroom. You have all these chemicals flying around your body stressing and spiking.

Yeah, yeah. Which will give you more energy back so that you just have more in a tank, because you can't change the fact that your kid is young and not sleep of the night.

No, it's a good point. And I think it's like you got to work with you where you're at, right? So it's like, here's the negotiable issues and non-negotiable.

I'm not going to get rid of a kid. Yeah, obviously a kid will grow up eventually. So there's this will improve, but you can absolutely support it. But this is where the data is important because you can pick and choose now and be like, here's the five things that are stressing you.

Can we decide that this week we're going to tackle this one right. And they if they see it and then they take your recommendation and it works. They can see right away that it worked.

So another benefit that we're always trying to provide is how do we give more affinity to the provider. How does the patient feel even better about working with Doctor Moore.

Right. It's like we want to facilitate that because we want people now the system has gone so far away from having good bedside manner, the doctor knowing about you and your family, like back in the day, that was normal.

Nowadays it's like you go and it's probably the different doctor in the hospital. They don't even look at you. They look at the charts and make notes and then they're like, here is your prescription, right?

And I think that's very demotivating for people. But like if they can be like, oh, Doctor Moore recommended this and it's working. Oh he recommend this is working.

Then there be like he's right a lot of the time. And he's proving it to me. And I think that's a beautiful thing. Yeah. Confidence is huge. So many people have been on a health journey for not just days or weeks when they're they're looking for doc.

They're they've been on it for years. Yeah. They've tried all kinds of things. There's a lack of confidence and every recommendation, every doctor by the time they get to that point.

So any bit of confidence, any wins, you can give somebody is huge. Yeah.

Hidden stressors and root-cause discovery

And trying to find ways to give wins is part of what it is to be a doc to some degree, because we're looking for those wins and develop a program where you're like, okay, switch your water.

Okay, you did that. Heck yeah. That's a win, right? Like, yeah, it's it's a big deal. But if you can see bio biometric data and I can tell you I once had a client.

So 20 years diligently following directions, I mean, her health history was pages long and I just had read it first thing that that triggered that kind of like and trigger me that, that that got my attention.

And she's like, no one's ever sat and read my whole thing before. And I just on what else am I going to do? You know, like, how can I make a decision.

Like, that's your history? How do I know what you've done? If I haven't read through this? I mean, have I had a few clients, were very wordy, and I'm just like, can we bullet point this? Yeah, sure.

But it's still you have to know the person to make any sort of decisions. But we went three months and she's like, I'm not feeling any different. I don't really know if I want to move any further forward.

I feel like just given up has been 20 years. Yeah. Well, can we run just some some more labs just to see if

anything's changed? Yeah. So we did. And Barrett antibodies went down and her iron level went up and her red blood cell count got better.

Not done. But first time it ever moved positively. Yeah. She's going to give you three more months. And we became friends after a while. Yeah. And I was like, oh thank you.

Right. Like thank you for giving me three months. Right. I was like, all right. But after three more months, she's like, I'm still not really feeling a whole lot better. I'm like, can we run labs again?

Yeah, we saw some significant changes now for the better. And the markers, I gave her more confidence to give me more time. Well, after nine months, she's.

I really feel an change in her physical body. So she already knew she really likes data. So every three months, for two years we ran labs and consistently saw, yeah, movement until there just wasn't a whole lot to talk about.

Yeah, but having data on your arm where I don't have to send you the lab to draw the blood, that's a little more invasive to where we can see that real time and make decisions, I think is absolutely the future of medicine as a whole.

The future of communication, confidence. I mean, shoot, my dad retired and like so many guys that retire that are manual laborers, what did he do? He sat in his La-Z-Boy.

Yeah, all winter and did not move. Yeah. And bet you would. You would bet. What happened? High blood pressure medication. Yeah. Astral medication. All sorts of stuff.

Ends up coming to my office and going, I can't move. My back's locked up. I'm in so much pain. His kidneys couldn't handle the meds. Yeah, and I was just, like, could be there.

So after some discussion and talking with the doctor, we pulled him off of meds immediately. Pains are coming down. Over three days it was back to normal.

Had he had some sort of biomarker tracking going on, I would guarantee you you'd see the stress building. Yeah, HIV going down, blood sugar going up. Whatever type of marker you're following is going to change here.

You go. Wait a minute. The day I put on started those meds. Tick tick tick tick. Because it wasn't me. It was over about a week that these things happen.

And then when you stop them, you'd see them going back up. Right? Which for me as a doc, analytical data that doesn't involve. How someone necessarily feels about it.

Yeah. Is really useful to have on top of how they're feeling. You got to have both. But sometimes I will ask a person, how are your symptoms? And know give me a list of symptoms, a 0 to 10 scale.

And then I'll ask them to tell me subjectively and subjectively, they're like, I feel a whole lot better, doc. Their numbers are worse. Well, that tells me where their headspace is.

That's, that's that's a little bit about how they perceive. Yeah. The numbers. Or maybe they tell me I'm way worse, but the numbers are better. Yeah. Well, that tells me some of that internal conversation that they're having with themselves on how they perceive what's going on.

Whereas that analytical data, especially if they're depressed because work's bad or the relationship's bad, their numbers change subjectively. That that would well, it would change if they're depressed because it's stressing them out, but it wouldn't change based off of just how they felt about it.

Right? Right. So I love the data, and I'm really excited about the patch that you can recharge. I'm stoked about that

the day that it comes out, but I'm always excited.

I mean, I've had heart rate monitors since 2004, and the technology there is just light years better than it used to be. So, totally. What other health tech is going on?

What other health innovations are you seeing? I think the interpretation of, one of my favorite ones is that we're working on two is how do you make it easy for people to log their inputs?

And then how do we interpret those outputs in an easy way that you can interpret as a doctor, but also as, as the consumer. So one thing that's exploded is I, as everybody knows, that the thing that's exploded is the quality of images that we get off phones.

So the last six and a half to seven years, every phone has light. Our technology was just means every photo you take is actually 3D mapped. It's not 2D anymore.

So the marriage of AI and 3D mapped images, we're soon going to be able to we're testing this about 85% confidence. Take it. Just take a photo of what you ate and we'll give you your macros and the portion size.

And so that's going to be cool because whether you're tracking that or not, will you be able to get more and more comprehensive analysis on what people are doing, how they're eating it, what the macronutrients are looking like?

AI food logging and the future of tracking

But this is this is like the intersection of technology that's going to create all of these cool products, right? Because ten years ago it's not possible.

You know, people wanted to do this. This is actually an idea I had a long time ago. It was just 2D mapped images. There's just no way you can get portion sizing on that now that there's millions and probably billions of of of data points that we've collected, of images that are 3D map, that we can look at other images across the web and where AI is in terms of our interpretation and, and looking at that data, that's going to be really cool.

So I think that's going to be a really cool offshoots like that, or just something that was so cumbersome becomes extremely simple, but also really actionable.

The the scale that technology is going that just automates life and makes things simple is incredible. I know for myself, I'll ask people, who can you track of food for three days?

And I hear that and I'm like, I'm just trying to get an idea of what you're eating so I can understand if it's affecting your health. And yeah, and you can just hear the groans and I'm like, I'm not asking for 30 days.

We're not doing this whole protocol right. Just three days. Yeah. And I think it's simply just take a picture and it just uploads and here you go. Yeah. Which I'm sure I won't do that for everything.

You got some soup in there? You know. The big surprise really? Yeah. So we've been testing it. Like I said, it used to be at like 70% accuracy month over month.

We're gaining. I feel like we're getting 2 or 3% more, which is exponentially ridiculous if you think of it in months. So at this point, I'm like about 82 to 80%, 80 to 80 3 to 85% confidence in what it's reading.

And it's just going to take billions of people taking more images, those going online, being able to access it. But personally, if you're eating things and we allow you to just what it was actually in there, the AI will learn off of that too.

So it's kind of like a two pronged approach with the technology also getting exponentially better. I have a high confidence that in a year this will be absolutely amazing and even maybe up to a 90th percentile.

Well, yeah, that made me way more likely to track some food. I'm eating. Yeah, because even still, with where I am with my health and being a doc and working with clients every now and like I check in on myself, I'm like, is my portion size right now eating enough?

Good macros? Am I have I slid a little bit too much into the food I like? Totally, yeah. You know, do I need to retool some things? Are my numbers matching?

Like, am I getting too much protein? Too little protein? So just being able to go snap, snap snap is going to massively increase compliance of just doing those simple tasks.

Yeah. Making health easier. And easier and easier. Exactly. Well this has been enlightening because technology is something that we all know about. We love to hate it and love it even more every single day, because it's just changing the way things are operating.

And if you can keep up, I mean, even within my clinic and using AI to help give better responses and faster responses and more clear responses, I mean, it's just changing the game.

So really thankful for you to come in and talk about your expertise here. And I tell people to understand now and soon in the future. Biomarkers are going to be every second versus yeah, every quarter.

Exactly. Yeah. Well thank you for having me. I really appreciate you and your expertise in your practice. And I was an absolute pleasure to be on. Thank you for tuning in to Redefining Walls with doctor J. Evans.

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