Can We Really Reverse Aging? Chris Mirabile Separates Science from Longevity Hype | Ep. 181 Transcript

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Introduction to longevity and Novos

The number one age-related disease and the number cause of death globally is cardiovascular disease. 100% of the NovoScore study participants had at least one benefit to a functional marker.

We didn't design this as a cardiovascular supplement. Designed it as an hallmarks of aging supplement, we just happened to look at the heart first because of how important it is.

Why is supplementing nutrition so important? Practically a hundred percent of people had at least one nutrient inadequacy. And so my perspective on this has been the simple solution for most people is I would say a healthy point of view podcast or top rated show.

We're bringing experts from all over the world to talk about health, wellness, beauty and mindset. Chris is the founder and CEO of Novos, a longevity entrepreneur using science-backed nutrition to help people live healthier for longer.

After building products around the science of aging, he joins us at our podcast and longevity center to put longevity into practice and uncover what truly moves the needle.

If there is one supplement that everybody should take every single day, Which one is? If you wanted one single, simple supplement for longevity, Novus Core is going to get you 90% of the way there.

And when you consider all of this scientific studies that we've run on the formula so far. Is it similar to these other products in the longevity space?

There's really no comparison. All right. We got to to it, Chris. OK. Welcome to another episode of a healthy point of view podcast, your top rated show, where we're bringing experts from all over the world to talk about health, wellness, beauty, and mindset.

Today's guests, you guys have seen them before. This is the guy behind the product that I take every single day religiously. Listen, me being in the health and wellness space, there's just so much noise.

but you gotta be able to kinda, you know, swim around that noise and grab the products, the services, and the modalities that make sense.

Can aging be reversed?

The ones that have science behind them. So this is the product that you guys hear me talk about, The Novo's product. You know they have three of the main ones, Core, Boost, Vital.

I love them all. Who do we have here today? We have Chris Mobley! Good! Welcome back great great to be back. Yeah, man Bringing the energy, you know, we're loaded We're full of ATP production inside of our bodies.

So we got the Novus product. I think the last time you were here You didn't have the vitals but the vital product back then you only had the boosts in the core.

They think so so But man, I'm gonna get straight into it that you don't Chris Since the last time you were here, things have changed. There's been some studies.

You got some really powerful preliminary results that have come through that are being peer-reviewed. But since the time that you're here I'm going to ask you, can we reverse the way we age?

No, we cannot reverse aging. And another similar question is, can we extend human lifespan? And the answer is there's no scientifically proven way to extend the human life span just yet.

Now, if you reframe the question and you ask, Can we expand health span on an individual level? By looking at their lifestyle and their particular vulnerabilities, let's say, and then address those.

Can we help people to live healthier lives and longer lives than they ordinarily would? Yes, we can do that. But in terms of extending lifespan to 130, 150, 180 years, like you hear influencers talking about and saying that's how long they're going to.

There is zero proof that that's actually possible at this point in time. Right. But you know, it's funny, man, that you bring that up. It's I remember when I first got, when i started liquid Vita, I was almost like 14 years ago, but I got into the longevity space when it was like 19 years old.

I'm almost 40. So that like 20 years. And I was working with Dr. Willis, who was my mentor, and the buzzword anti-aging was like always just like everywhere.

Every day, every med spa, Every conference, the anti aging conference. And he would always says, you can't stop aging. There's no such thing as anti ageing.

It's age management. Its managed the way that we age. You know, it's kind of pretty much what you're saying here, too. Yeah, yeah, I would say so. So this term longevity is something that really originated in the field of the gerosciences, so the study of aging.

This is what biologists and scientists are actually studying, like why do we actually age? Unfortunately the term longevity has now been used so carelessly there's top scientists in the field who i know personally who have hired a marketing agency a branding agency to consult them on what the scientific field should rename themselves to.

Lifestyle fundamentals vs biohacking gadgets

so that there's no confusion with all of this consumer hype around, quote unquote, longevity. So the same issue you're talking about with anti-aging, we're actually kind of, facing it, at least in terms of the naming convention for longevity, we're facing that now.

But to your point, yes, you can't actually reverse aging, You can to actually extend human lifespan, At least at this point as far as we know, but you interfere with different aspects of aging process.

You could also look at personalized medicine and look at an individual like if you care to I can talk about despite how healthy I am some doctors visits to to learn about certain vulnerabilities that I have as an Individual and how I need to treat my health differently than another person might need To treat their health And by doing so, I'm taking a prophylactic approach to my health so that I can live a longer, healthier life without a disease of aging, setting it until, at least hopefully until at a very old age.

Yeah, and I think those are the, you know, when we look at longevity and we start thinking about what longevity is kind of divided into two parts, right?

Health span and lifespan. A lot of the noise has always been, oh, lifespan, how many years are you going to live? But one of the things that you're really touching on is that health has been that quality of life.

You know, the years that are here on Earth, you know what is the quality life going to be? Are you going have good vigor and vitality? Right? Um, are you gonna be able to go up a flight of stairs?

Or are gonna able tie your shoe? You're gonna do these things, play ball with your grandkids once you have grand kids. But Chris, you know, one of the things, man, is, and you see it all the time at all these different conferences and some of clinics, like there's all of these gadgets, all this expensive stuff in this biohacking longevity world.

Even at Lincolveda, we have it. And you what, I think what I'm gonna say right now, the reason I always say it, And I probably don't make as much money as I should because I say this, but I go back to like, when it comes to longevity in biohacking.

it starts with a few things that are completely free, that actually cost you nothing. And the first thing is biohacking starts no, right? Understanding the things you need to say no to, and actually apply that to your life, because knowledge is power if you apply it.

So, starting off with the thing that you have to no say to but then the other ones that I always talk about is exercise, sleep, nutrition. So my question to you is like, we know you and I both know that exercise, sleep and nutrition outperform a lot of these expensive technologies and modalities that are out there.

Why are people still so focused on all of this expensive technology? because they're novel. They're exciting and they are fun and it might take some of the work out of it for them.

So you need a lot of self-discipline to be able to have a standard bedtime that you go to sleep every night and staying in bed long enough and improving or working on your sleep if you're not sleeping well and to eat a healthy diet and avoid that cake or to avoid alcohol.

to get off of the couch and onto your feet and into the gym or out for a run. Like all of these things require significant effort. And if instead I can lay on my couch, go on phone and press buy it now on Amazon for some device that I could sit in the comfort of my home and put it on me and then press start.

and supposedly get the benefits, well, of course, that's what everyone wants, but there's no comparison. When you're talking about a lot of these biohacking devices, we're taking about moving things mere percentages relative to the lifestyle tweaks, moving it tens of percentages in terms of, if we think of 100% being the optimal, the highest level of health you can achieve right now, getting those fundamentals down will probably get you to 95%. So to get another 5%, if you're an optimizer, a maximalist, if want to, sure you can do that.

Balancing longevity with quality of life

To go from 60% healthy lifestyle and then adding these biohacking tools to 65%, well, it doesn't compare to actually cleaning your diet up or getting to bed on time and sleeping well and so on.

Now, you know, people in this health and wellness world that want to take control of their health, they start following a lot of these influencers. One of them is this guy who spends over two million a year on his health.

Brian Johnson. Right. And he spends all of this money. So people I've had friends reach out to us. Me taking care of my health, it's just kind of ridiculous.

I gotta go to sleep at six o'clock in the evening, I can't have a slice of pizza, can go have glass of wine. What is your comments on something like that for the people that are watching these type of influencers that out there that is spending this ridiculous of money.

They're going around the world, tapping into some of these longevity modalities and technologies, but this is what people are seeing and this what they relate longevity to.

We could spend the entire episode just talking about this one single topic, this single question. I can go in many different directions with this. The first that comes to mind is let's just set the foundation here.

When we look at the longest lived people in the world, the centenarians and the super centenerians, They are not

doing anything that Brian Johnson is doing, right?

They're having some wine, they are having red meat, for example, not crazy amounts like some people do, but they have some in their diet. They've got other aspects in their lives that these biohackers like Brian are not emphasizing like community and psychology and being stress free or at least moderating their stress and be able to cope with it when they have stress.

So there's so many things that the longest lived people have in their lives that are not being emulated by these biohackers. And then when you look at how extreme these biomhacker can be with things, you need to start asking the other question, which is, am I trading quality of life for quantity of live?

So I believe it should be a balance. You want to have an adequate or ideally a high quality of life. and still be able to extend your quantity of health span and lifespan as well.

So that's where we get into this whole idea, the trustworthy Pareto's principle, this idea of the 80-20 rule. What is the magic mix of investing in my health and having some of these pleasures of life and how much is that really going to damage the quality of my life?

So I would say something like, someone might think a small dose of alcohol at night, like a red wine or a glass of scotch at 9 p.m. and they go to sleep at 10.30, that's a smaller dose and that they can do that.

But if you track it, it's actually really damaging. It's going to damage your sleep, you're going wake up in a poor metabolic state, and so on and there's so many things.

If you were to change that to, for example, maybe you want to have that wine at like 5 p happy hour or with dinner or something, hours earlier, it's not going to impact your sleep at that point.

So that would be the idea of moderating. Understanding what the cost is of the quality of life that you want to live, at least in that case, you would making informed decisions about how much is it negatively impacting me and is worth And oftentimes I find for myself, once I realize how negative it can be, like that glass of wine, how it really messes with my sleep if it's within three hours of my bedtime, I just decided to stop drinking within 3 hours in my bed time.

This is really important information for people to recognize because You know, when I got into understanding like the longevity and biohacking space, and I was working with Dr.

Willis, I remember I wasn't working at the fire department, And I get to a point where I had severe adrenal fatigue. It was borderline like irreversible.

And, you know I, was doing a lot of things to take care of my health, but Dr Willix, he straight up sat me down and says, dude, You need to start meditating.

You gotta really calm that nervous system down. you have a lotta sleep deprivation, adrenaline's always going when you're at the fire department running these 911 calls.

So that's where I really kind of thought about it. It's like, man, I got two choices here. I either start doing some of these things and really taking control of my health or I gotta quit this job.

Right. And I was only like about a few years in, probably like six years then I did 12 years out of the road. So that's where I kind of started to think is like, you know, a lot of these things that are done in the function of medicine, longevity space, these are things so we can live the day to day lives that we do, the normal lives, right?

Being able to go out, how you said, and have that slice of pizza or have a glass of wine with friends and be in that community, understanding, OK, well, if I am putting this toxic alcohol in my body, maybe I go into the infrared sauna two, three times a week to help detoxify the body et cetera.

So that's very important for people to know because it's not you know, I feel like it It's more difficult to take control of your health When you have to go number one cold turkey to something new and then you can never go back to the way you were raised You know god i'm dominican man.

I grew up in dominica food, you imagine me going to my mom and says no mom I can't have your cooking. That's crazy. So um chris You're talking about You, know all this stuff that we're, talking, about you're very data driven And, you know, I understand being data driven because I'm a guy who likes to be data-driven as well too.

You have the Apple Watch on. Um, use certain tools. you've also have measured over hundreds of biomarkers on yourself. And I'm pretty sure you do it not just because you want to do for yourself, but also because during the business and you, you wanna make sure the things that you're putting out there make sense.

And there's some kind of science behind it, especially when you starting off, do a lot of things with yourself friends, family, et cetera. Now checking all of these biomarkers, going so deep consistently and looking at all this data.

does that cause a level of anxiety to you, doing all that? And the reason why I ask is because, You know, when we talk about doing all of these different diagnostics and all these data, there's some research that recently came out where the people that were overly obsessive on taking care of their health, the stress of taking of the health killed them before the good things that they were doing was making them better.

You follow what I'm saying? So my question to you on this is, you're doing this stuff with the data. How do you find that easy medium?

Tracking biomarkers without obsession

Yeah, the balance. I believe you're referring to orthorexia. So I've been tracking biomarkers for about 20 years now. so I got blood labs going back 20 year.s I have got different devices like Apple watch or the withing scale and so on, tracking things.

First of all, for most of these biomakers, I rarely even look at them. I had this idea back 20 years ago that one day we're going to have AI technology that was powerful enough to make sense of all of my data.

So that's the main reason I was collecting all it, while also making sure there were no outliers. Like if I look at my blood labs, I don't want my HbA1c, my Blood Glucose to be too high.

I would look those things, but as long as everything was within range, and I didn't obsess over any of it. check the boxes and then just put it away in the files.

Now with AI, that day has come where we can make sense of all of this data. And I spent a lot of time with Claude actually building analysis into my data and all these different data sets, like I've got the movement and I got this sleep metrics and blood labs, et cetera, And it's actually now becoming helpful where I can get quick answers to different health-related questions I've got or to that point about me having specific health needs.

I have high cholesterol, for example. And so looking at, the diet I was following and the correlation to the different cholesterol levels, gave Claude the guidance that it needed to give me for what types of foods to avoid, et cetera.

So in that sense, I never really obsessed over the data to the point that was really interfering with my quality of life or inducing stress on me. I'd say that the data points that I do look at relatively regularly are, for example, my sleep score with my aura ring, how many calories I burned, My VO2 max from my running.

So the Apple watch approximates it. I want to see that that's in a healthy range or it's improving. But those are things that kind of keep me, I don't know, in shape, so to speak.

They're checking on me. I look at it and I realize, oh, didn't sleep too well last night. All right, let me take it a little easy today. Or with the O2 max, it's declining a bit.

Okay, lemme push my training a lil bit harder. So they're actually good positive reinforcements. And I mentioned before with alcohol, the Oura ring got me to, drop my alcohol consumption by like 98% probably.

You're drinking at night? Drinking in general. So like I rarely drink now. I lived in New York City and from like, I'm telling my parents, but like from 16, basically from16 until like my, maybe like 30 years old.

You know, three nights a week, you go out for dinner and Thursday night, Friday night Saturday night you have drinks with friends, You have wine, whatever.

New York is a drinking culture. And I almost completely got eliminated. The exceptions are I was in Tuscany and there's wineries and stuff. Yeah, I'm gonna drink wine and I going to enjoy myself.

But there now needs to be an occasion for me to have the alcohol rather than it just being part of like the daily routine. And I was talking to my dad about this yesterday.

We went to a restaurant and we saw so many people, young and old, just drinking, doing shots and everything. It just made me think like, how much of this is really just integrated into the comfort that people have as part of a routine?

And will people challenge themselves to kind of be uncomfortable for a while? Believe me, I was uncomfortable going out with friends, nightlife, not having any alcohol in me while they were drinking, but you start to adapt and you find joy in other things and ultimately I ended up in a better place by doing that.

And you know what? The culture is actually changing. You know, like alcohol consumption is down tremendously. I mean, I think they said it's in the billions of dollars that the sales have gone down.

The younger generation is not drinking as much. They're not. But there's this other part, though. And I say for myself, because I'm the same way as you now.

It's I haven't eliminated drinking completely, but I've made like a certain like goal. My wife and I, we've told ourselves we're drinking five times a year.

And it has to be like how you said, it hasn't been an occasion, by not just an occasionally. Also for us has been experience. Like if we go to Vineyard or we got to the restaurant that has these special mixologist and this, you know, fifty dollar drink, I'm gonna try it, I wanna enjoy it.

I want to be with friends and family at that point. It's worth it in my opinion. But the other thing that you and I have that not everyone else has is that, you're consistently studying this stuff and how it affects the body.

So there's a level of responsibility that your've created for yourself. Every time you take that sip of alcohol, You and your head, you know what that alcohol is doing.

Not everyone else that's out there drinking, they really don't look at it the way you and I look it. So do you ever feel, the best way I could put it is like, remember when you watch a show growing up, like Full House or Family Matters, and someone has to make a decision between a good decision, bad decision.

You got the little devil here and the angel here. Does that ever happen to you? When you are drinking and you think it's like And, you know, it's like, this is not really the best thing.

Alcohol, recovery, and personal health choices

Should I even be doing this? Like, the drink was the mixologist who made this drink. This didn't even make it good. It's not even like worth it. Tastes like shit.

Like how do you feel when you drink? When I drink, I enjoy it. I don't overthink it, now I will make sure, like to your

point, it's gotta be an excellent drink.

So it is not like when I was younger, let me get some 151 so I can get as drunk as possible with spending as little as possibly. That's how I thought as a college student.

But now it's like, let me have a high quality glass of wine or a very well-aged scotch or something or mixed drink that tastes very good. So for me, no, I don't really think about it.

And I'll say that, It wasn't only the aura ring. I started to reduce my drinking back in my late 20s, early 30s for a different reason, which was, as you know, I had a brain tumor when I was in high school.

And I've wanted to do everything I could to avoid being in a situation like that again, whether it be a tumor or any sort of chronic illness where you don't know if you're going to wake up the next day or not.

It's a really scary experience to go through. So that got me curious at one point about whether alcohol was correlated with cancer. And back then, this is like 13, 14, 15 years ago, there wasn't that much research published.

It wasn' easy to find a connection between alcohol and cancer, but I did find some, and that's how I discovered the website PubMed, which is where all of the scientific studies are published, And I came to realize that yes, alcohol is carcinogenic and it can increase the risk.

So it wasn't like an immediate cessation of alcohol at that point, but that planted the seed in my mind of long-term effects of this if I'm really truly about health.

this is the biggest vulnerability that I'm running in my life right now. It's like, I exercised a lot, ate healthy, tried to sleep well when I wasn't drinking.

Everything else was kind of good, but alcohol was that one thing that, that needed to kind overcome, so to speak. And it took some time, now here I am, 42 years old, and, you know, drinking probably like you are, like three to five times a year or something in that range.

You know, it's cool how you mentioned about the aura ring. Having these tools that have the data that will give you the alert like, hey, maybe you shouldn't eat so close to going to sleep.

And then you're looking at the date also where if you do drink before going asleep, what is happening? Are you going into that deep sleep? Or are you actually getting good REM sleep, Chris, today you had the opportunity to go to Liquivita, to our Longevity Center here in Fort Lauderdale.

How was your experience there? It was fantastic. First, thank you for being so generous with everything. Yeah, absolutely. Someone like yourself who's very data driven.

A lot of people in the industry, they say they have longevity clinics or wellness clinics. And the part that bothers me the most is when they had these clinics, but they're doing nothing to actually look at the data.

They're do nothing and look under the hood. So you go in there, you say you're feeling fatigued and they put you on testosterone therapy or they just supplement you to supplement.

So, um, do you were able to experience a lot of different data tools that we have, right? The DEXA scan, the O2 max or more. Um, even the, uh, image pro.

Yeah. You know, I'm very self conscious right now. Uh, so out of all those, all the stuff that you did over there. What was kind of most intriguing to you?

Well, I'd say of all of those things, the thing I had never done before, believe it or not, is a DEXA scan. So I've always been, you know, lean and exercising, and I have done in-body before.

I know I'm low visceral fat, so I hadn't really prioritized it as much. But obviously like that is the state of the art. It is highest quality standard for measuring your body mass and whether it's fat or muscle and your skeletal density and so on.

So it is fantastic for me to now have that data especially because I mentioned earlier I have a Whitting scale for example that's very similar to the InBody.

You hold a handle and it's sending electrical current through your body to then approximate the same things, essentially. But now that we've got the DEXA scan, I can use that to kind of tune the results.

And to that point about using Claude and AI, my withings score today, actually the in-body I did at your facility also and the DEXA, and that will help to tune all of my results going forward.

So that was very valuable to me. VO2 max is extremely valuable, to that point about longevity. Actually, let me step back. DEKSA is very variable for longevity, for the point of visceral fat, the fat that surrounds your organs.

and the higher your visceral fat, the high risk of health issues. And so between that and then also the bone density as you get older, like right now it's not really an issue for me, but if I were 60s, 70s and older then that bone a density really comes into play and if you were to you know, trip and fall or fall down steps and so on, and crack your bone, that's not what kills someone in their 80s or 90s.

But the fact that they then need to become immobile and they have to sit in a wheelchair, et cetera, they're not being physically active and, so, on. That is what typically then leads to massive decline, accelerated decline.

And then people will pass away shortly thereafter. that bone mass is actually very important. So the DEXA scan for those two points, very for longevity.

And then to that point about VO2 max, a very strong correlation with essentially your likelihood of passing away.

DEXA scans, VO2 max, and bone health

the lower your VO2 max, the higher likelihood, and the high your vo2, max by percentile for your age, lower chance of passing away. So VO 2 max is going to be increased by essentially stressing your heart in a cardiovascular sense.

High intensity interval training is one of the best ways to do that, which then enables your body to use a higher volume of oxygen. And so that's something that I personally train with my longevity approach to my health.

And the Apple Watch approximates it, like I said, but again, it's just like my winning scale versus Dexa. It's not the highest quality standard. So getting that actual VO2 max from you guys today, I can then use that to kind of tune my result from my Apple watch.

so I know, hey, maybe the apple watch is overestimating by two, or underestimating by a point, and I can use that to get a more precise understanding of what it actually is.

Yeah, that's powerful information to have, man. Especially once you have the results, how you said, well, okay, so if my VO2 max results are on the lower end, then how do I improve it?

That goes into effect, right? Is doing the high intensity training, doing a few days of zone two training as well too, You know, those are things that I've implemented in my own workout regimen to be able to take care of those things alongside with how you said the Dexa as well, you know man, I remember it's interesting with what you just said about Someone older like breaking their their bone like their femur their hip I Remember when I started working at the fire department and I didn't understand this until my my tenure at The Fire Department I remember running a call my first year in the fire department and it was a little old lady who broke her hip.

And I heard all the other guys and girls that are working with me at the Fire Department says, oh, that's it. Everything goes downhill from there. I didn't understand that.

Then I remembered running another call probably weeks later and they started saying the same shit again. That's for this reason. It's gonna get surgery.

Why do you guys say that? And then I started noticing that those individuals, exactly how you said, what causes them to decline is that they're no longer mobile.

So they start losing all of their muscle, and it's very hard to put on muscle once you get to that age to begin with. And no lie, within a few years, most of the people that were breaking their hips in the fire department, because we work in that same municipality, so you're running the 911 calls on the same people.

you would actually see them. Their health would just circle down the drain and within two, three years they were done. So that's something extremely important, what you just mentioned, about people maintaining very strong bone health, especially as they age.

Yeah, yeah. And that actually some feedback that I got from this experience, which is that although my bone density is good and healthy, it can still be better.

Right. One of the recommendations that your team gave was, for example, rucking. you know, go on the treadmill with a weighted vest or something, right?

So I'm already doing heavy deadlifts and putting some strain on, on muscles, but, sorry, I was sorry on on in the bones, But I can do more. And so that was some great feedback that I wouldn't have otherwise gotten if not for the DEXA.

That's exactly what I started doing. I starting working. Bored my 40 pound vest, you now go out there for 45 minutes to an hour, put myself in zone two and it's a good for fat burning and also bone health.

Yeah, cardiovascular health. Yeah. So cool. First, I want to go ahead and segue into our topic here that we're talking about today, which, you know, we touch up on a few things already, but the 12 widely known hallmarks of aging.

Right near the novels product. You guys are doing some great things with a lot of different nutritional supplements that are inside of your products, what they're made up of.

And you're putting a lot of science behind your product, which I highly appreciate. Because there's been a few times that I go into the traditional medicine world, and I've had doctors, I remember when I was going through a fertility doctor, a urologist down in Miami, Very very well-known urologist who you know has a lot of research, but I went down there to go see him I remember talking with one of his other and Initially with, one, of, his, other doctors that did the initial intake and he was asked, well what medications or you Know products supplements are you taking so i listed everything out Anything that was a nutritional supplement the first day says, oh that's garbage don't take it If you had a doctor say that to you right now, what would you say?

I'd say that you're not informed on scientific research and I would defer to scientists in this case rather than a practicing medical doctor. And the reason is that scientists are the ones who are actually conducting the studies.

This actually reminds me of when I was first founding Novos. I had this idea to try to target all of the hallmarks of aging simultaneously. And I was beginning to network with scientists, like world renowned top scientists in the field of, of ageing in genetics and so on, uh, people from MIT and Harvard medical school and, and one of most fundamental questions I needed an answer to was, If I am using natural molecules to target these hallmarks of aging, am I creating a product that can actually do good for people's health, or am creating, as doctors like to say, expensive urine?

And I asked point blank, scientist after scientist, after scientists, this question. We're talking like eight scientists probably. And every single one of them said that there's every reason to believe based on prior scientific research that these natural ingredients can have a favorable effect on these hallmarks of aging.

In fact, there is a well-known scientist who was an advisor for Novus for a long time. His name is Dr. Matt Kaberline. He was at MIT with Dr. David Sinclair of Harvard, a very famous scientist behind Resveratrol, if you've heard of that before, and also now reprogramming the epigenome and trying to cure age-related blindness.

So this is, these are very serious scientists. And I did a podcast interview with Doctor Kaberlein and I asked him essentially the question of pharma versus natural ingredients.

And he said, there's no reason to believe that a natural molecule cannot be as powerful as a pharmaceutical compound. The difference is that you might need a larger dosage of it.

So for example, a pharma compound, you may be able to get 10 micrograms to do what you need it to, and for a supplement, maybe you'll need 10 grams of the supplement to it, but there is no reasons to think that simply because it's natural.

Why nutrition and supplementation matter

That it won't work a molecule is a molecular and that's how a scientist thinks about it and I would say that the doctor that you're referring to just he has been biased by say a pharmaceutical agenda within the medical curriculum.

And while pharmaceutical drugs can be super powerful, natural molecules can also be powerful. And many pharmaceuticals drugs actually came from nature.

Metformin or rapamycin, two very powerful potential longevity drugs that are used for other purposes, diabetes and organ transplants, came form nature, so how is that even possible if natural molecule can't do anything?

So, you know, that reminds me, Chris, when I got into the IV vitamin therapy space and started learning from a lot of these longevity experts, the functional medicine doctors like Dr.

Mitch again, and I'm going to their courses and they're showing me how to create the concoctions, these IV drips. And I started looking at everything that we start putting into these IV drips, magnesium, calcium, potassium, sodium bicarbonate, right?

Thiamine, which is B1. And i'm looking These are the same damn drugs that we have in our drug box and emergency medicine. This is what I'm giving to people who have that are in cardiac arrest or have a dysrhythmia.

You know, I am using these these drugs. That I m thinking in my head the whole time. I' m in emergency. Medicine. to get somebody out of cardiac arrest or someone out respiratory arrest, or somebody who's in a dysrhythmia as an anti-dysrhythmic.

So that's where I really started thinking, it's like, we use nutrients as drugs in emergency medicine. Magnesium sulfate for seizures, eucalyptus seizures.

We use thiamine for diabetic patients when we give them glucose. You know, we gave them the B1, the thymine. we get adenosine monophosphate, you know the adenocard, We give potassium, calcium.

All of this stuff is just nutrients. Your body runs off of nutrients and a lot of people don't understand that. So, talking about nutrients, We do hear people preach all the time, and even doctors in the allopathic world, they preach at all time about, oh, nutrition's important.

Doctors will at least tell you, hey, you need to eat healthy. I don't know what that means when they tell me that. But

when we talk about nutrition, why is supplementing nutrition so important?

Let's start with nutrition. Yes, nutritional is foundational. What is considered healthy, I would say, There's different labels for different types of diets.

If you want to use a label for one of the healthiest diets ever, it's the Mediterranean diet. And study after study shows, even when you compare it to other diets, is either number one or it is tied for number 1. It's like never number 2 or 3. This is for long-term health outcomes, risk of disease, lifespan, healthspan, etc.

But if you wanna get away from the label and just look at what constitutes a very healthy diet, it really comes down to eating foods from nature, minimally processed foods.

Now, the idea of a processed food, I think that the health and wellness world has really not done a good job of being granular enough with that because Yogurt is processed food, right?

Because there's a fermentation process, or cheese is a processed foods, what we're really talking about is these ultra-processed foods. Like a Snickers bar is very different than a yogurt, than the Greek yogurt which can provide great probiotic species for your gut, for example, and protein and so on.

So, it's not that you need to avoid all processed fruits, use your brain and realize what the difference is between something ultra processed versus something that is natural, traditional food that's been around for millennia really.

So that the first thing, get as much natural food as possible. Now there's all of these debates between like a carnivore diet versus a vegan diet and so on.

What I'd say is it is undoubtedly true from again, many studies that eating a lot of plants in your diet is very healthy and you should make that a foundation of your Diet that means a lot of vegetables and fruits and yes even grains grains are fine And then when it comes to that protein get it from eggs and from seafood Ideally, those those are very nutrient dense And then, as I mentioned before, even centenarians have some red meat in their diet.

I'm okay with having some, but when you talk about the extreme of a carnivore diet where you're only eating red and nothing else, I'd say that's not a longevity diet now.

There might be reasons why people need that. Maybe they have autoimmunity and they find that they can tolerate that diet better and their symptoms subside.

I can't comment on that for a particular individual, but what I would say is in general when it comes to longevity, having a lot of plants in your diet and a moderate amount of protein, not an excessive amount or protein is going to be best.

So then to your question about supplementing and nutrition on top of that, There is a very well-known data set called NHANES. It's here in the United States, it's tens of thousands of people, It monitors their diet, their lifestyles, and all different health outcomes and so on.

So it is an enormous data-set, similar to the UK Biobank, but UK biobanks even bigger. There was analysis done of the NHANES data set looking at if people had any nutrient deficiencies or inadequacies.

And an inadequacy is defined as not getting enough of a nutrient that it would then lead to less than ideal health, let's say. So it's not as far as a deficiency where you might get scurvy without getting vitamin C.

That's a clear deficiency. but maybe there's a level of vitamin C that isn't a deficiency but you still aren't getting all of the antioxidant benefits that you would need for vitamin c.

And essentially what that study found was that practically 100% of people had at least one nutrient inadequacy. Maybe it was iron, maybe it iodine because they went to Celtic sea salt instead of having iodized salt and they

didn't replace it with say seaweed or something, which is high in iodine.

Maybe it's choline. Choline comes from egg yolks and there's a modest amount in spinach, for example. So everyone was getting an inadequacy of at least one nutrient.

And so my perspective on this has been the simple solution for most people is take a high quality multivitamin you're not going to overdose on these nutrients because most of them are water soluble and even the fat soluable vitamins, they don't dose super high.

And while you might be getting 95% of it already from your healthy diet rate, that 5% that you don' know what that five percent is that your missing, the multivitamin is going cover it for you.

So it's like insurance for ya. Absolutely. So I remember you did a video online and it was um, I don't know if someone asked you but I Remember you answering it if there is one supplement that everybody should take every single day Which one is it?

And I'm talking about what you have out of the three that you had. Oh, out the Novos stack, okay. All right, that's a much easier question. For the Nova stack it would be the Novos core formula.

The Novo's core. So I know that there's lot of excitement even amongst your team and your family with like NAD and NMN and there is a lot great science behind that but the reason I wouldn't put that above Nobo's Core is that NovoScore is at an entirely different level.

NAD is definitely involved in energy production and sirtuins, which can help to repair our DNA and definitely relevant to longevity. Again, that Dr. David Sinclair I mentioned has really popularized NADA and NMN and so on.

Choosing Novos Core ingredients

With that said, Novo's core, first of all, 12 ingredients, and it's taking this very holistic approach to the aging process with all of these different hallmarks of aging.

And it is doing it in a way that has never been done before. When you consider all the scientific studies that we've run on the formula so far, even looking at the placebo-controlled clinical trial we did on this formula, And comparing that to clinical trials of NMN or NR, I would argue our results are much more significant for NOVA's core than have been reported for NNM or NR.

And we can talk more about what those results were, but I will say that if you wanted one single simple Supplement for longevity novus core is going to get you to the whole point of like Pareto's principles gonna get 90% of the way there and then if you wanna get to 99% throw the novice boost the NMN on top of it.

You know, and the thing is, is that the product itself, it's so easy to take. It's not all of these pills and capsules where you gotta have, you know your hands full.

Yeah, sometimes when I do take pills in capsule, man, I start thinking, like I can do this now, but when am 80, 90 years old, I might die taking some of these horse pills.

I've had this grim thought so many times, which is like, how ironic would it be, longevity founder dies from choking on pills? And stuff like that happens.

When I worked at the fire department, things like would happen with old people. And us, and I say young, because I still consider ourselves young even in 40s or late 30s, You know, I started thinking to myself throughout the day, like the things I do throughout today, how am I going to do this when I'm 80? Like even when i'm in the shower and I have to stand on one foot to watch the other foot with my loofah, you know I start thinking is like if I am 80 years old, i am probably not going be able to just like stay standing.

I will need a little shower share. It's like this is the importance of quality of life that if people don't start addressing these things and taking care of themselves now, that's gonna be a problem.

So going back to the actual core, you've developed this thing where it's in a powder form. Tastes good. It's easy to ingest right by by taking it mixing it into water Now the the ingredients that you have in there How did you select what to put in when it comes to because you said there's a total of 12 Yeah, so so how did he select the best of the Best for the 12? to go in there.

Yeah, great question. So counter to what most people think, we didn't choose 12 ingredients for the 12 hallmarks. It's not like one for one. Every ingredient in their impacts more than one hallmark.

Okay. How did we decide which ones to include? So there were a number of filters that we put the ingredients through. One of the first filters was, was it found to extend lifespan in at least one animal species, ideally multiple species.

So every single ingredient in the formula has been found extend life span in that at one species and oftentimes in more than one animals species And it's really important to emphasize more than one animal species because this is something that scientists refer to as evolutionary conservation.

So just think of it this way. Imagine C. elegans, a little tiny worm. They might have a specific bio pathway that's important them, but when you get further in evolution to say a mouse, Evolution decided that's not an important bio pathway for the mouse, so it gets rid of it.

So if you have an ingredient that extends lifespan in the C. elegans via certain pathways, and it also extends it in a mouse. That means that that bio-pathway was so important that evolution decided to keep it not only for worm, but also for mouse which then means that there's a higher chance that evolution also kept it for humans.

And so we also looked at ingredients to see if they were replicated across different species. Ironically, the research that we used for all of this is based on this database online that has tracked every single study of every supplement or drug in every single species ever studied for lifespan.

So it's the most complete database in the world for it. And the ironic thing is the creator of that database is now Novus's head of R&D. We have true hardcore longevity scientists in charge of our R & D at the company.

That was one of the criteria. Another criteria was that it could not have any substantial negative side effects in human studies. So obviously everything can have some sort of side effect.

Like magnesium can cause some stomach discomfort depending on the dosage. The dose makes the poison. But we needed to make sure that none of the ingredients would have significant negative, side-effects at the doesages that we used.

We what else we we checked human studies. We wanted to make sure that human Studies showed that it would have positive effects on human health. we can't measure lifespan in human.

Studies so we wanted. To look at things that were indicative of say overall health or health span and so on. So there's additional criteria. So if you go to novostlabs.com slash approach, we lay it all out there.

But then in addition to all of that, you had thousands of scientific papers. And we, along with our team of Scientific Advisors, again, people like George Church, a famous geneticist at Harvard Medical School, and Matt Caberline, who I mentioned before.

It was a team six scientists and one medical doctor, longevity researcher, together. Put together the formulation trading papers with each other giving insider information like in the science world what you see in a paper is.

Only what they put into a few pages in scientific paper but if you can imagine the amount of asset knowledge or

insider knowledge that the scientists have.

that they would then give reasons why you shouldn't use this ingredient. Although the study was positive, there's a lot of early lab work that is showing that maybe it's not as positive as it seems.

It's complicated, I would leave that out. So we had those types of insider discussions with the people who were doing the actual studies that everyone refers to as the science for these ingredients.

Man You know, I want to get into the the studies and research that you guys have gotten with the core product But before we get in to that man, there's a big elephant sitting in the room.

You hear it You're it the big Elephant man the Big Elephin and people every single time I bring up the novus they bring it up and say always dislike the AG1 product, is this like the IM8 product?

Is this the Brian Johnson's Blueprint product. So I gotta get this elephant out of here, man. Is it similar to these other products in the longevity space?

There's really no comparison. Okay, all right. Now we gotta to get into it, Chris. your product is superior to all of these ones that I just mentioned.

Yes, and for each one, it's for a different reason. So for AG1, what I would say is that it is a mix of a massive number of ingredients with no true scientific rationale behind the combination.

And when it comes to health, more is not better.

Comparing Novos to other longevity products

I'll tell you why in just a couple of minutes when I wrap up for all of them what the fundamental issue is. but they've done, for example, clinical trial looking at microbiome and it essentially said that there were some changes to the microbiomes, not negative or positive necessarily, but what I would argue is that you can have a cup of yogurt or some sauerkraut and you will have an even greater impact on your microbiom just from having that cup yogurt.

So I could talk more about it, I think that the internet has already said a lot about AG1, so I'll park that to the side. Specifically for IM8. Between us, they've claimed that they were the first company to target the 12 hallmarks of aging.

They're not. We have a press release about when we did it, which was before they even existed. And I've reached out to them, asking them to take that claim down, and they said that wouldn't.

But putting that aside, looking at the actual formulation, they have two products. Their longevity product does not have any scientific research behind it.

There's no studies of the combined formula in humans or in animals and so on, which we can talk more about what our research is, but they don't have that research.

For their other product, they're really targeting AG1, and they did what they would call a clinical study, which by technical definition it is. But they hired a CRO, a contract research organization.

This wasn't done at an academic, hardcore lab. It was something that they paid for. And the study was looking at, it was basically a subjective study of participants' feedback from taking the product.

I don't remember how many weeks, But imagine if someone asks you how much energy you have and how you're sleeping, et cetera, before taking the product, and then in eight weeks, they ask you the same question after you've taken the products, then you come back and you say, yeah, I feel a little bit more energized.

Well, placebo will also make you feel little more energize, right? It's a known phenomenon, the placebo effect, that's why you need these placebo control studies.

And it's all subjective, it not looking at objective markers of your actual health. So I would say that it is a study in which they can claim they've been clinically studied, but not all clinical studies are at the same level, right?

There's different tiers and levels that a scientist or a medical doctor would consider to be a serious study versus one that is not so serious. And then You asked about Brian Johnson blueprint.

I would say again similar issue with with IM eight There's as far as I know no scientific studies on their formula either the the claim is mainly like Brian, Johnson says that he takes his own product And look at his health is basically his claim, but I would push back on that and say that he also had genetic Editing and takes many prescription drugs and hormone therapies and lives a two million dollar life And how likely is it that this powder that?

He's taking is actually leading to the results that. He has got versus everything else that He is doing the two billion dollars, right? Exactly. I say you need a human placebo-controlled, double-blinded study to really get to the answer.

And so the unifying thing for all of these is that most people don't realize this, but there's been multiple studies that have looked at the combination of multiple longevity ingredients together.

This is done in animals because you have to when it comes to lifespan studies, whether adding longevity supplements together extends lifespan even more.

So it's a logical conclusion for someone to come to to say if ingredient A increases lifespan and ingredient B increases life span, let's combine them together to have an even greater result.

What research finds is that in the majority of cases, they counteract each other and they have a weaker effect when you combine them. And I believe in one study by a researcher named Ocampo in Switzerland found just in 2025, I think it was 16% actually shortened lifespan.

So it wasn't even just counteracting, it was actually causing harm to the animals. So my position on this is that you can't conclude that more is better or combining longevity compound A with B is actually going to be good for your health.

You need an actual study in real human beings Um, ideally, or at least in animals to see is, is this combination actually synergistic and leading to better outcomes or not?

And none of these other products, as far as I know, have ever done any of this type of research. Uh, we've done it multiple times. Wow. Thank you for that answer, that response, because I think that can help bring some clarity to the industry when it comes to that.

Now, when is comes these different products, your products they've been approved and also certified by different organizations. You guys distribute yours through Mayo Clinic, right?

Yes. So the store at Mayo Clinic sells the Novus product line, yes. Which is interesting because certain people that sit on some of these other supplement companies are part of the Mayo clinic, but your product is on there, theirs is not.

Yeah, so this was a very long process. So we have been in conversations with Mayo Clinic for probably around two years, 18 months to two before they agreed to carry our product.

And it really came after a number of things. One was the actual scientific research and then ultimately the clinical study was enough to then get them to agree to put our products in the store.

But there's also relationship building over that time. The head of Longevity Medicine at Mayo Clinic Arizona got to know our team and our lead scientist very well and realized that we are legitimate.

I mentioned before our Lead Scientist, Dr. Diogo Berardo, he came out of National University of Singapore under Dr. Brian Kennedy's leadership Dr Brian, Kennedy is considered one of the top longevity researchers in the world so he's coming from the field of bio gerontology the actual study of aging and is is bringing the Top-tier science and everything from machine learning and biological age clocks to the formulation development and the molecules we use and so on and So after they spent enough time getting to know us they realized that This is at their standard high enough for them to at least offer it in their shop Wow, that's amazing man.

That's a big step. It was I said so Chris Earlier, you said that the dose can become the poison, right? and that something from giving people nutrients intravenously and I know that.

When people say, oh, it's just water-soluble vitamins, you're just making expensive urine. Like, no, listen, if I give you too much potassium, your heart will stop.

If I gave you to much magnesium, You're gonna vagal out. Your blood pressure's gonna drop very quickly. Now, obviously, that's going intravenously directly in the cellular system, so the effects are very immediate.

So, you know, when we talk about some of these supplements, there's other forms of supplements that are out there. These new nanotechnologies, liposomal.

What can you comment on some these other technologies in the supplement world when it comes to this like rapid fast absorption, getting past the membrane barrier, et cetera, all this stuff?

Yeah, so again, what I had said before about more is not necessarily better. It definitely holds true in this scenario. And so first, why are people making liposomal molecules for a specific ingredient?

Clinical research behind Novos Core

It's for the bioavailability. Bioavailable is a term that's thrown around pretty loosely on the internet and social media for different substances or supplements.

you know how bioavailable is and I get the questions myself like we I Remembered not too long ago. We sell our product also at air one in Los Angeles And I had multiple people who are health-informed saying well how Bioavailable is what does that mean?

Yeah, exactly. So so it's so when you orally ingest The specific supplement or the in our case the twelve ingredients in a supplement they each have different bioavailabilities in terms of their ability to make it into your bloodstream.

There's multiple reasons for it can be broken down in the gut for example are the liver might filter it out is all different reasons. What I would say is that unless the answer is it's got zero bioavailability, what's more important is not the bio availability, it is the dosage at which studies have found positive effects from that molecule.

So I'll give an example. If you've got a molecule that's only 1% bio available, and you need to get one milligram into your bloodstream for it to have the positive intended effect.

What does that mean? It means you a hundred milligrams of that molecule. And if you're taking a 100 milligrams, you are good because you getting the dosage that you actually need.

So the fact that it's only 1% bioavailable is not in itself a problem. But you to understand is what dosages do you for to be able to perform the function that your looking for from it.

And so getting back to that point about liposomal encapsulation or nanotechnologies and so on, they have actually

two different issues. So with nano, there's been research that finds, and I'm speaking in generalities here, I am not talking about every individual supplement that's ever done this, but oftentimes nano makes its way into your liver and it kind of accumulates in your livers and your live can't get rid of it.

So that would be the first concern I would have. If there's a supplement that was nano, I'd look for research about if it accumulates in the liver and if the body can detoxify and remove it or not.

When it comes to liposomal, you're basically encapsulating that molecule in a lipid, in fat, and that makes it get through your gut and digestion into your bloodstream.

intact for a molecule, let's take like curcumin, that's a popular ingredient to get liposomally encapsulated. It gets broken down very easily in the gut unless you add black pepper in, it can help to reduce the breakdown.

With that said, the lipasomal encapsulation will get more into the bloodstream. which is potentially good, but it really depends on how much is the right amount.

Again, more is not necessarily better. So if there's research showing that by getting more of that into your bloodstream and 10Xing it is actually really good for the general population, okay, great.

Have the human studies to prove that. Or maybe it's only good an arthritic population. I don't know. So you need that research. But then the second thing that would concern me with liposomal encapsulation, not always, but this would be, again, something I would look into, is if it is permeating cells that don't want that specific molecule.

So the lipisome will be able to permeate more cells and kind of force itself in. Whereas if was just the raw molecule in your bloodstream, the cell might be like, oh, we don't want that curcumin, or we've got enough.

But the liposome might actually then lead to it being absorbed. So when a brand says it's 100x more orally bioavailable, That's not necessarily a good thing to your point going back to the beginning about the dose makes the poison a hundred times more of something is not Necessarily better you need human clinical research to prove the safety of it and the efficacy for whatever it is and Then at that point then then you can start taking it a little bit more seriously But I don't believe you should encapsulate everything without first doing the Safety Studies and The Efficacy Studies absolutely Chris, but you guys have some recent studies that have come out with the product.

Let's dig into it, man, because it's something that I've become excited about. You're very excited. And I think it is time for us to really talk about it.

Yeah, sure. So we've done many different studies. We've in vitro cellular studies, human cellular, studies we have done animal lifespan study, and we showed that we extended aged mouse lifespan, so the equivalent of about 60 human years in mouse terms.

And this is what the court brought. This is with Novos Correa, where it was administered at that 60-year-old equivalent. And even administering it that late in life, we were able to extend aged mouse lifespan by almost 20%. And this was at the order of magnitude of what's called a positive control.

So we had a negative control, which is what you would expect, the mice not getting any Novo's. But the positive control, they were injected with a prescription and R&D senolytic cocktail that was known to be able to extend mouse lifespan already.

So that's great for, that makes the study even more powerful because we basically tied the result of that injected R and D drug that we already knew would extend lifespan.

That was fantastic for us and with all of We said, all right, we've got the in vitro mechanistic studies, We've Got the Animal Lifespan Study. Now we need to bring it to actual human research.

And so what do we research? I mean, there's just so many different possibilities when designing a study. You have

to keep in mind budget and we're a startup.

We're not a pharmaceutical company. we can't run thousands of studies or thousands patients. So what we decided to do was focus on cardiovascular function.

The reason being that when you think of longevity and health span, the number one age-related disease and the one cause of death globally and in the United States for both men and women, so everyone, is cardiovascular disease.

And the heart, you could argue, alongside the brain, is the most important organ in our body. Without the hear, the brains won't get the blood it needs and the fuel it need, et cetera.

And every cell and every organ of the body needs the hearts to be functioning properly. So, for all of those reasons, we said, all right, this is a great organ for us to focus on.

The next question we had was, who should run the study? And we weren't looking for a CRO where we could just pay a research organization and have them do a quick study for us.

We wanted the highest standards. That we've always held ourselves to the high standards, so we reached out to one of the top cardiovascular doctor researchers in the world.

So his name is Dr. Christian Heiss. He's German, but he's now at University of Surrey in United Kingdom. And his work is, if you think of all of the health benefits of cocoa and chocolate that came out of, the brand Mars years ago, he was the one running those studies.

So he is very, very familiar with running studies to see if a substance is going to improve cardiovascular health. And we looked at a number of different biomarkers, but we wanted to focus on what's known as functional biomARKers.

So functional biomarker measures the actual organ function. If you think of more common biomARKers that you find in studies or even in say like blood labs and so on, these are more surrogate markers.

so if you take LDL cholesterol and HDL and triglycerides and that might be correlated with cardiovascular health and disease, et cetera. But it's not actually measuring whether your vascular function is ideal right now, right?

It's something that can lead to issues in the future, also still very important, but it is distinct from a functional marker. So functional marker are things like flow mediated dilation, that's endothelial function, the ability for your blood vessels to dilate.

So if you, for example, are exercising, you need your vessels dilates so that you can have more blood flowing through. And as you age, it's less capable of doing that and your endo-thelio tissue starts to break down.

Second is the blood vessel flexibility. This is measured by something called pulse wave velocity. How fast does the pulse waves when your heart beats travel through your veins and arteries through you body?

The faster, the worse. Because as you can imagine, something that's very hard like this table here, this sound wave moves through it very quickly. But if this was like a water bed and you knock on it, then the wave move very slowly.

And you want your blood vessels You want your blood vessels to be very flexible. And then third is blood pressure. Blood pressure is incredibly important to understand your risk of some sort of event, but also when you have high blood pressure, it actually leads to more sheer stress on your blood vessels, on you heart, your kidneys, and even your brain.

And so there's research that finds that, for example, high pressure can lead to a higher risk of neurodegenerative disorders like dementia, kidney disease, obviously heart attacks, et cetera.

So that's why these biomarkers were relevant. Now I'm not going to make any medical claims about our product, we can't. as a supplement, but that's the rationale behind these different biomarkers.

So the study that you guys conducted, what was the ultimate outcome of that study? Yeah, so it was approximately half male and half female, 61 people entered the study.

And then we had a placebo group and the experiment group. The experiment took the equivalent of one packet of Novus Corp per day. That placebo took an identically flavored and looking powder.

It was exactly the same flavor, but they didn't know that it a was a placebo. There was basically like a cornstarch or something. And so after taking, so there were three different time points in the study.

The first time point was before taking anything and all of these different biomarkers and blood labs and everything were collected. Then the second timepoint was at about one hour after ingesting the placebo or NovoScore.

And then the third time was that six months. So, at time point one, we saw an immediate benefit from Novo's core. We improved flow-mediated dilation, that is the endothelial health, the ability for the blood vessels to dilate.

A very significant degree. The placebo didn't see any effect there. So that shows that there's an immediately acute effect, as they would say, from the product.

Vital, bars, and future product strategy

Then at six months, people went through the same measurements except they were fasted for 24 hours, which is important because that means that after not having Novoscore in your system for a day, do you have benefits still, right?

Which is because we don't want it to be something that works for one hour and then at two hours it stops working. So we wanted to see at 6 months what are the benefits and do they last a days after you stop taking it.

And we improved all three of those measures by a very significant statistical margin compared to the placebo, which for us, honestly, it was a surprise.

It was positive surprise, we went into the study hoping that we would get one single biomarker improved which would be considered a success for. To have gotten all 3 functional markers to improve, was not only a shock to us, it's also just very rare in scientific studies for all of them to improve like this.

And so we improved, again this is versus placebo, the flow mediated dilation. We improved the pulse wave velocity by 1.2 meters per second to put that into scale Your pulse wave velocity increases by about one meter per second per decade, and we decreased it by 1.2 meters per seconds.

And then systolic blood pressure. Now, FDA disclaimer here, this is for people with blood-pressure already in the normal range. So we're not talking about people who have high blood pressures who are in a medical condition.

We're talking otherwise healthy people. We were able to reduce it by, versus placebo, I believe the number was 6.1 millimeters of mercury, and that is a very substantial change.

Every two millimeters or mercury reduction in blood pressure can have long-term health, positive health outcomes, And we were to do it 6.1. All of these measures, we then wanted to see how did we compare to other supplements and even lifestyle interventions like aerobic exercise and high intensity interval training and weight lifting, sodium reduction because we know sodium raises your blood pressure, right?

Severe weight loss as they categorize it in studies and Mediterranean diet which we talked about before. Now, I'm not implying that NovoScore is better for you than exercise and eating healthy and so on, right?

We already talked about how those are the fundamentals and there's other benefits beyond just vascular function that you get from eating health and exercising and on.

So, but putting that aside, if we look at these specific biomarkers and compare it to other studies, distinct studies we outperformed Practically every lifestyle intervention that the study that we came across and we did a very thorough analysis and We have that published on our website how we do the analysis.

And then when it comes to supplements for pulse wave velocity, I believe there wasn't anything any equivalent study outperformed us. For flow-mediated dilation, we were well above 90% of other interventions.

And for systolic, sorry, reverse systoly blood pressure above more than 90 percent of interventions, and then for flow mediated diolation we outperformed the majority of supplements, heart health supplements.

This is some powerful data. So what's happening now? Yeah, so so well right now it's under peer review so the study we publish as what's called a pre-print so that we could get it out there and talk about it publicly and Right now there's a journal that's reviewing it for peer-review.

It was also reviewed by a medical conference a hematology conference taking place in the United Kingdom and and so they reviewed it and approved it for presentation.

Just last week, actually, our lead scientist presented that to a room full of doctors and researchers. And so we're kind of just getting started with this.

This is extremely exciting research for us because I had this hypothesis from the very beginning, which is by targeting these hallmarks of aging, you could have downstream effects on aspects of aging, your phenotype as it's called, you're actual biology and how it is manifesting, so your organ health and your overall health, right?

And so we had this hypothesis by targeting these hallmarks and then the studies showing that we have a positive effect on these Hallmarks, and so on, then we the animal studies, but we didn't know in humans, this hypotheses doesn't prove out.

And while we can't 100% conclude That it proves out. This is a very very strong piece of evidence for us that that hypothesis actually is Proving out in the form of our our biology and a couple of other things to note one is that 100% of the novus core study participants had at least one benefit to a functional marker and So oftentimes, this is statistics, these studies, and you might have some people that didn't have any response or had a negative response.

100% of the people had at least one of these three functional markers improve. And it was, I believe, around 95%, approximately, that had two or three of them improve, so I think it's just one person who had only one improve and everyone else had 2 or 3 improve So very, very significant number of people have improved from it.

And so then the question becomes what's next in terms of studies, because we didn't design this as a cardiovascular supplement. We designed it as hallmarks of aging supplement, we just happened to look at the heart first because of how important it is, but now the questions is what are the follow-up studies so that we can see other organs or other systems, other processes, are we having a positive effect on those?

Yeah, man, that's amazing. So Chris, you know, so much positive data and a lot of outcome here with the Novus Core product. So, and you mentioned earlier, like if there's one product to take, take that one.

Why the Vital? So vital is more for organs that are declining as we're aging. So if you think of core as addressing the fundamental aging process and the overall aging and mechanisms and hallmarks of aging, and it has some short-term benefits like improvements to skin health, improvements with sleep, improvement with energy.

Novus Vital is more about organs that you might start to notice are declining as you get older. Like, for example, vision. There are two ingredients in Vital, lutein and zeaxanthin, and these are carotenoids that can Pigment your

your retina your eyes and as we age we start to lose some of that pigment and Research has found that these carotenoids might be able to improve Vision in I believe very bright light settings and then also in very dim light Settings so So that's the rationale for those ingredients.

There's other ingredients in here that are also good for cardiovascular function, like, for example, natokinase. You've got other ingredient in there that is good muscle, this is more focused on organs that start to show signs of aging and And it's in a different format.

It's an enjoyable format I think you like I love It like my little snack my sweet snack throughout the day, you know a little tart little flavor So but yeah, and that's the important part about it.

That's why I brought it in into the conversation. Its We're very focused on the core product, but when we're talking about overall health and these 12 widely known hallmarks of aging, we do stack things with our nutrition.

So to talk about these twelve hall marks of ageing, What are the primary ones that you would say Novo's product is primarily focused on, in your opinion, or the primarily ones we want to be focused when it comes to the 12 Marks of Aging?

Yeah, so for that question, there's actually a lot of debate in scientific circles about what are the most impactful of these 12 hallmarks. And I think it's universally agreed that not all of them are as impactful as others, and some might actually be further downstream or a consequence of some of the earlier ones.

But I don't know if everyone really agrees on which ones are the more impactful ones and it tends to be whatever field that scientist is studying thinks it's the most impactful one.

I'd say that one that is definitely very impactful for the aging process is genomic instability that's technically DNA damage. And so we've known for a long time that DNA damaged can cause mutations and cancer and so on, and I'm not speaking about my product now, I am talking about the hallmarks, but it can lead to cancer.

And while our bodies have the machinery to try to repair DNA damage when it occurs, things like sirtuins for example, or the immune system might see the cell that's turning senescent, which is another hallmark of aging, then try and remove that cell from the body, destroy it through autophagy, it doesn't always do that.

And so if you've got an organ that's got multiple cells with DNA mutations in it, then that organ's probably not going to function as well. The epigenome, which is a layer that sits on top of your genes, is one way to think of it.

It's essentially which genes are turned on or off, and it's actually more like a dimmer switch, so it not necessarily 100% on, or 0% off. That's anything in between.

And as we age, the epigenome starts to get dysregulated and it starts a behave in a way that it shouldn't. And so David Sinclair, who we mentioned earlier is doing research along with many others to try to reprogram the Epigenomes so that if you take cells and by extension an organ, for example, The eyes that are, let's just say 80 year old eyes.

to reprogram the epigenome of those 80 year old eyes to be that of a 20 year olds eyes and then restore vision. That's what they're working on and I believe they've shown already in animal studies.

So that's also a very powerful one. And then when we're talking about all these hallmarks of aging, you also got the bars. You decided to come out with the bar.

And that was something that very important to you, to came out a very powerful nutritional bar with right purity behind it. Good, powerful ingredients, none of this filler crap and all this stuff that your body has to really process with a lot of these different bars that you see out there now.

Tell me about the bars. What got you into doing the bar? So I've been eating protein bars since I'm probably 14, 15

years old. And when you're on the run, you need a snack, instead of having something unhealthy, I would try to default to a protein bar.

But at the same time, they were somewhat of an Achilles heel, because to your point, They are typically full of these fillers or chemical ingredients, and there's one brand that's very popular right now, it's got a gold label, that uses not only artificial sweetener, being sucralose, like Splenda, but also uses artificial fat now too.

And then it doesn't really have any micronutrient value to it, very very little, practically none. And so my vision was I wanted to create a bar that if I couldn't sit down and have a super healthy meal of like spinach and Brussels sprouts and salmon or something, I want it to be able to have bar, that I had no regrets about.

That I felt like I was getting the healthiest thing that they could possibly put into my body. So that's what I set my team out to do, but then I put other constraints too that almost seemed impossible.

Like for example, it had to taste good, and it also had be under $4 a bar. And so that made it extremely difficult, probably about two years to actually get to where we are, but we achieved it.

And so this bar, to your point, doesn't have any chemicals in it, everything in is natural, even to the point of what type of oil did we use? Instead of say, a seed oil, canola oil we used olive oil.

Organic olive. we've got when it comes to the sweetener we use a little bit of honey and a Little bit stevia, which is actually 100% natural and might even have some antioxidant properties to it We've Got half a multivitamin per bar if you recall before I was talking about how important I think a multi vitamin actually is Well, what if I could not have to take one?

I just eat two bars a day and I'm getting 100% of the daily value for most of micronutrients that I need. And then we've got five different supplements, longevity supplements built in.

So we got three functional mushrooms, reishi, cordyceps, and lion's mane. Then we have got one and a half grams of taurine and three milligrams of astaxanthin.

It's one of most popular skin health supplements out there. but it has benefits beyond just the skin. It's what makes salmon pink or flamingos pink, shrimp pink and also very powerful ingredients.

And so for all of those ingredients, we made sure we use the efficacious dosages from scientific studies. So I believe it's 200 milligrams of each of the different mushroom extracts and then I mentioned the other dosage.

Awesome. Chris you know I have the opportunity today to actually sit with the founder of not both right And you're there you working every day very hard doing what it needs to do to make sure that it's this powerful good quality product right Not too long ago.

There's a company called foreign. I think it is I got a cut got acquired in What ended up happening the internet? It broke the Internet base. Ah, you know, good quality supplement.

Now the big food companies, they took over and now the product is going to shit. How do we know? How to we prevent that from ever happening? Yeah, well, so what I would say is that I understand why the internet would immediately react that way because there's historical precedence for brands that have gone that.

I. Would question if that's actually going to happen to thorn. I think that these big brands realize we're living in a different world today than we ever did before.

And that first of all, the consumer is a lot more savvy, especially a wellness consumer, is lot savvy research driven and so on. Second they realize that this is the way the world is going like it's about preventative health now and it about wellness and being proactive with your health and so on and So for such a valuable company multiple billions of dollars.

I don't think that they're going to risk Throwing away all of that brand equity that has been built over a very long period of time so And I'm speaking somewhat from personal experience.

So Novos recently brought on an investor, which is Unilever Ventures. And so getting to know their team and understanding how they're looking at the space and looking the evolution of the spaces and so on.

I would say that I think that their minds and their intentions are in the right place. So I wouldn't conclude that just because it is a big brand that they're going to cheapen the brand or make it sacrifice the quality of the products.

If anything, when you hit a larger scale like that, they might be able to bring cost savings, for example, because they are dealing with much, much larger quantities and so on.

The verdict is still out. We'll have to watch and see how things evolve with them. And believe me, I am. But I'm hopeful that we are in a different era now with these very selective acquisitions that these bigger brands are making.

because they realize what the discerning consumer demands and they're only demanding it more and more. And I think even with AI, they are cognizant of how easy it is for someone to get that information with a AI and understand if they were taking shortcuts or the product isn't as good and so on.

Even if if didn't want to be, there being forced to maintain those high quality standards. So, you know, this is your baby Novos is a baby. So you as the founder are there any like when you brought the investor on board are There any non-negotiables like hey, This is you're coming on Board you invest in this money, but you are not allowed to do this in particular.

Was there any kind of non-negotiables for you? Well, yeah, so just to put it in context, they came in as small minority investors. They cannot tell us how I'm going to run the business.

So we brought them on strategically because they have a lot of insight into how to grow a business like ours and can introduce us to a lotta valuable players in the marketplace, which they've already done.

And they also had a very good, strong, powerful, or positive reputation with people who had critiqued other big brand investors. They said very positive things about them.

So that was all very important to me. But for me we are we our biotech company at our core and we just happen to focus on the consumer and natural ingredients and they know that and appreciate that about us and that's what we're going to continue to do which means we going have biotek level standards to the degree that we able to afford them as a startup company.

to run scientific studies to Run analysis on our finished products to get a coa and make sure that there's no contaminants and so on and that the product is pure To make that we're making a difference in people's lives because for me, this is personal I mentioned that my brain tumor and I also lost my mother to pancreatic cancer and to me I ultimately want to reduce the suffering in this world that can come from poor health and I want optimize people's health.

So that's the foundation for me of this brand. If the investor doesn't recognize that and what my vision is for it, I wouldn't allow them on the cap table.

That's powerful, man. Thank you. So I want to get these cool conversation cards from the diary of a CEO. OK, so you'll open that up. And then you get to pick two random cards, from anywhere in there, random card, you got to read the card and answer it.

Okay. What topic is no one talking about now that historians will study in the future? I'm Chris Williamson. Oh man. No one's talking. Okay, um, The issue is people are kind of talking about it right now, but what I would say is that not enough people talking is we are in this very odd era right really accelerating its intelligence at a pace that I don't

think that we as humans can fully comprehend, even as we're using it.

And what does that mean for the future of humanity, for life, and that applies to everything from health to careers, to purpose, two relationships. I think we're going to see massive change in the coming years.

And I. Think historians will look back at this time right now as where it all truly began, literally like this year, last year and next year. Like this is the period that they're.

Going to look at as like the year zero in. The context of this. That's an interesting thing, man. It can also be pretty scary at the same time. The Matrix.

Yeah, I know. I, the Matrix was one of my favorite movies. And then there's, there is also Terminator 2, right? Like, and you got to wonder like what, what actually is it?

And, you know, There's also the philosophy of the simulation theory and like whether we're, we are living in one. When you look at future of AI, it becomes more plausible that perhaps one day we get to that point, which we'd almost guarantee we were already in it.

It's a living in the metaverse. Yeah. It gets my brain going into these weird directions sometimes, you know? Yeah, what else you got? Okay. One from Billy McFarland.

Um, if you could only speak with call, see touch for people for the next four years, who would they be? Ooh, I've never heard of that one. That's a new one four years.

Wow. Well, there's going to be a degree of this, or I don't know, maybe I'll speak in more general terms. So it's gonna be, a family member, at least one, who I'm very close to.

It's to going be I think, someone who's entertaining, because you know they're gonna go four years. Who would that be? Who that would be. Oh man. someone that's entertaining.

Someone who's entertainment. I don't know. You know, if I if if i had a girlfriend right now I would say it would be her right like you know that person that so And I don't know.

That's a tough one, right? Four people, four people. Yeah. But who's that entertainer? I dunno who the entertainers would be. I'll come back to that. Um, I think the third might be someone who is like just super intelligent, like able to just stimulate my mind.

Like give me Give me the like the satisfaction of learning something and then the fourth one would have to back to that point of a girlfriend or a wife it would Have to be someone because it said it's a see and touch.

So For how long for four years? So yeah family love loved one Entertainment interesting education and physical. Yeah, what about you? I Man, these are your questions.

For me, it would have to be family members, man. Obviously, I had to the wife. And then, you know, if it's for the next four years, that definitely include both my parents because I don't know how much longer I have, with them, they're getting older.

I got one brother, I've got two brothers and one sister, so maybe I'd have to pick between them. I'm not too sure what the fourth one would be, but those would definitely be three of them, my wife and my parents.

So yeah, not sure who the other one will be. It'd had to be someone who just feeds me a lot of knowledge. A lot a knowledge, someone very smart. I don't know, maybe my new little meta AI, the Muse, have you downloaded the app yet?

I haven't yet, but you know what's funny? That same day I was at the gym and there was a girl working out at that

the equipment right next to me and I saw she had a tattoo on her back that said Muse.

And Metta hadn't announced it yet, but I asked her, like, is that for the music group? Because I had a funny story about the drummer who I have met once, or is it just the verb?

And she's like oh, you know, my parents are fans of Muse, which made me feel old, of course. She's just like no, it's the verbe. And then I get back to my apartment one hour later and I see that Meta launched the Muse which got me musing about Yeah, I got on the list and they accepted me the other day, man, and I've been on it and the things working.

It's working, it's doing its job and it is posting for me. But you know, like the briefing document that Carlos put together for the podcast, put it in there.

and then actually takes all the information and reads it to me. I named it Poppy, Poppy. And I gave it like a little, like, a younger kid's voice, where it's just like my little homie that's feeding me information.

He said, hey, Sammy, you know, good morning, this, that. So, yeah, and I used the other chat, GPT, but this one, pretty unique. You know what, if meta came out with something, You know, I'm always on all these different platforms for meta.

Let me mess around with it. I mean, let me start messing around. With it early, you know to make sure I might following the trend and everything else.

Yeah. But cool. Man, Chris, we covered a lot today, man, as we wrap up here. All of this stuff that we talk about longevity, if you were to be able to extend your life an additional 30, 40 years than what it's Supposed to be what are you gonna do with that extra time?

Oh man, I mean, hopefully my loved ones are also extending their lifespan that much as well. And who knows with everything we talked about with AI and what will the world seem like or be like at that point in time.

I tend to think that it's going to enable us to live, be more independent and be physically capable, but it will probably also offer immersive experiences as well, so I'm sure that the way that we look at our world today pales in comparison to what it will actually be like at that point in time.

We're talking about 100 years from now, let's say, 100 plus years form now. I can only imagine what the world will be at point and I am sure there will plenty of things to keep me busy and happy.

And who knows the technology for longevity, what it's going to be at that point. Yeah. You might be able to live until your 500. Exactly. So, Chris, if there's someone watching or listening to the podcast that resonates with today's message, What's that last thing you can leave them off with?

Be Be on top of your life and your health. So I think too many people unfortunately are kind of defeatist when it comes to their health, they feel like they can't control it and life will just happen and to just live your live in the process.

If you invest a little bit, a moderate amount of time into your health, from the decisions you make with the foods you eat or the alcohol you decide to drink or not to, when you go to bed, all of these things, if you're at least present and conscious when making these decisions, it's not about right and wrong.

It's about being aware of the decision you are making and how they could impact your Just by doing that, I think you end up making better decisions for yourself that in the future version of yourself, you'll look back on this and say you made the right decision.

That's it, man. Your future self is always watching. And if people want to find you, where can they find it? Slow my age on Instagram and tick tock, and then LinkedIn as Chris Moroboli.

Awesome. Which will include all the links down below, including the novice links. So and we have a certain affiliate codes and, you know, discount codes that we'll also include.

Chris, it was a pleasure having you on a healthy point of view again. And we got some work to do, man, to keep things going in the right direction. Thank you.

Guys, you heard Chris here. Science is extremely important. When it comes to the things that you're putting into your body, when it come to claims that companies are making in regards to your product, look into the science.

We talked a lot today about how you can truly take control of your health. Make sure you take this podcast, share it with friends, make sure to follow him, follow Novos, and we'll see you for the next one.