

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

What do you think of when you hear the word biohacker for me, they used the conjure thoughts of cyborgs and people trying to splice genes and make superhumans. But as I spoke more and more with biohackers out there, I started to see that they weren't that different from a lot of patients I would meet, they wanted to optimize themselves. They were just starting at different levels that got me thinking, can we apply biohacking principles to medicine for better outcomes? I've seen what biohacking can do for professional athletes and top performers in some of the technology that we're using. We're also using in our medical clinic with tough chronic cases and seeing impressive results as well. That's why we're having today's guest on he's an expert bio-hacker and has authored a number of books, including stronger by stress metabolic autophagy and the immunity fixed, which he co-authored with. Dr. James DiNicolantonio, who we had on the podcast recently. Hailing from Estonia. He's got a unique take on how we can live healthier and longer. This is the story of biohacking medicine with Siim Land.

Caspar Szulc ([01:27](#)):

First off, Sam, thank you so much for being on the podcast. I want to really start with, with understanding how you got into this, because you wrote your first book at 21 years old, right?

Siim Land ([01:39](#)):

Yeah, it was.

Caspar Szulc ([01:40](#)):

Which book was that?

Siim Land ([01:42](#)):

Uh well it's actually, it wasn't like a health book. It was more of like a personal development book and yeah, it was most about like, how do you optimize yourself as a human being? Both like mentally and physically. So that was like a personal development book. But after that, I also wrote several books about the ketogenic diet and intermittent fasting. And in 2019 last year I wrote like what I would have considered like first, like a really like an actual book that I, I personally considered like a really, really important book. It was like a metabolic autophagy, which is about [inaudible] fasting of how do you use those things for longevity and lifespan.

Siim Land ([02:21](#)):

And this year I published a Stronger by Stress, which is about hormesis or like stress adaptation and resilience, as well as The Immune to fix with Dr. James.

Caspar Szulc ([02:32](#)):

So you've been really busy, but what I'm trying to get is that at 21 years old, I was thinking about kind of party. I wasn't thinking about health too much, even though I've been in medicine my whole life. What was your story that got you into this such a young age and got you so interested in biohacking health, performance longevity?

Siim Land ([02:51](#)):

I think of at least being curious about all those things of throughout my entire life. So I have wanted to just you know get smarter and stronger and faster all the time. Mostly when I delve into like these

biohacking things was yeah, just when I was doing like weightlifting or like, you know, doing gym building muscle and that sort of thing. That's where I try to figure out ways of just enhancing the process and getting more results. So that's why maybe delved into like nutrition, recovery, and just overall training.

Caspar Szulc ([03:23](#)):

So that's where it started at a young age. And what made you decide to write about it? What made you decide? Was it really just the passion about all this that you wanted to share with the world? Or was it something else?

Siim Land ([03:33](#)):

Yeah, I think good was like, partly about the passion I kind of came to the conclusion when I was in like my first year in college, when I was 20 or something that I would want to do, like something greater to writing or content creation or whatever it may that entail at the time I did consider like writing on a book is like something that I want to do in my life. And that's where I started to create blog articles and just other resources about it to kind of develop the skill of writing because like it's not going to happen like overnight. So I was kind of preparing myself in advance of being an author and doing this as a full-time thing at that time. So yeah, just starting off with articles and blog posts and moving on with like a bigger, bigger things.

Caspar Szulc ([04:19](#)):

Yeah. That's very cool. Cause you, you had goals, you had passions and you have this calling at a young age. And I think that that's incredibly important for health and longevity is to find those things, the intangibles, the esoteric pieces, which are a little bit, you know, give you that fuel to, to do that and to find it such a young age is incredibly important. I feel. Now you mentioned The Immunity fix. I had Dr. DiNicolantonio on the last episode to go into the research to talk about the book a little bit more. What was your experience like working with doctors in general? Not just Dr. DiNic, because he's awesome. But being a non-professional biohacker, you don't let's say have a medical degree, what's it been like working with other doctors or just the medical Community?

Siim Land ([05:04](#)):

A lot of it has been pretty positive. So after I've kind of established my platform on online and as a content creator and as a researcher then I have, like, you know, come across many doctors and scientists who have like, actually like acknowledged my work and they review it to a certain extent and yeah, like a lot of doctors like Dr. Mercola or Dr. Christopher Shade, Dr. David Sinclair, they all kind of at least consume my content on a regular basis and just, you know, they have like, some of them have read my books as well. And yeah, the feedback has been quite positive, but, and you know, there's, I'm sure like, I, I just haven't come across like these negative doctors who may be skeptical or who may be like very critical about biohacking. I haven't come across them personally but I'm pretty sure that they're out there.

Caspar Szulc ([05:51](#)):

Oh, I'm sure they are out there. Because I've been in medicine my whole life. My father is a doctor I've traveled the world, been around doctors, whole train doctors, created a whole company to help doctors really. And of course the ones that come to you are the ones that are interested and it's wonderful to hear that more and more like Mercola, Sinclair, Christopher Shade, all of these guys, they're kind of

pushing the boundaries are coming to you and embracing you. But conventional medicine still is the mainstay and the majority. And a lot of doctors there of course, you know, put down anything that's outside of just what they learned in medical school. Do you find it's difficult for people who may embrace a conventional mindset to then accept biohacking? Have you run across that? So let's get outside of the doctors. Cause it seems you've had favorable encounters with them. Well, what about the general public? Do you find some kind of resistance when you put it out or is it mostly people coming to you for that and not giving any negativity about biohacking?

Siim Land ([06:53](#)):

I think it can be like 50/50, so some people accept it and kind of enjoy it or acknowledge it. Whereas others are relatively skeptical. They may like, you know, embrace some of the practices of biohacking like in a fasting or a training or saunas and other technological things. They may do those things, but they just don't consider that as biohacking. Like they would just say it's just lifting weights or it's just that taking a sauna or something good, which is true to a certain extent. But at the same time, they may be just a think that the term biohacking itself is just like a marketing gimmick or something that may deceive some people, which I would say maybe there is certainly like this appeal to it. So to say that the term itself is it sounds more awesome than it actually is, but I think it's actually a good thing because, you know, even as a doctor, even as a health practitioner, you have to kind of also brand yourself just as an extent of how do you learn how to actually convey your messages to other people better so that they will understand it.

Siim Land ([07:55](#)):

And they would actually start to accept it because like, if you're like this dry scientist who goes only into like these theories and studies and research, then you're not gonna really make progress with the everyday person who doesn't really understand these concepts. And they will just want to hear like the simple answer.

Caspar Szulc ([08:13](#)):

I can agree, agree with that because in medicine I've found that most people just kind of let it go over their head when they're speaking to a doctor and their doctor starts to get into the biochemistry and start to list out all these things that they've never heard of. I do think medicine is failing in that respect to connect with layman terms and just with the person in front of them and have just a normal conversation. So I do think that's really essential for biohacking as well. Now, do you find that biohacking has a place in medicine or it should be more involved in medicine and with reversal of disease?

Siim Land ([08:52](#)):

I think so. Yeah. Definitely like let's say customizing your diet or lifestyle based upon your genetics is biohacking. And it's definitely like something that I think everyone should do at least to a certain extent. Like you don't necessarily have to follow it to a T, but yeah, you do have to consider some of genetic abnormalities or differences for sure. And like, there is not, not a single lets say a diet or a single workout routine that is going to be applicable to everyone. So we all always have to kind of customize it to the individual, even using like these different technological gadgets on an everyday setting is also very easy and very effective, like, you know, measuring your sleep because like, as a, as a doctor, you shouldn't just you know, look at like the biomarkers or something or like tell them what kind of foods to eat and what kind of foods to avoid.

Siim Land ([09:43](#)):

You should also be curious about their other lifestyle habits. Like how much do they sleep, how do they exercise? Yeah. Like what else did we do? And with like these gadgets gadgets, like you can use the Oura ring, or you can use the whoop band to actually get like more feedback, more a measurable quantifications about the person. Because like people, they don't really know, like they don't pay attention to those things. And they're not really aware either about like how well did they actually sleep? Like they may say that they sleep well, but in reality, they sleep only like maybe four hours.

Caspar Szulc ([10:16](#)):

It's really important to understand yourself, but also to use the data, to help understand yourself. I feel a lot of people have lost touch with themselves. They don't listen to the signs, the symptoms, the other things, and sometimes it is required a third party almost, or technology to help you to tune back in with your body. Do you feel that biohacking itself or these ideas that constitute biohacking should be applied differently to a healthy individual than a diseased one? And let me quickly make my case here a little bit and explain that because to me, a lot of times it's like someone who's going to the gym, you have weightlifters that are well-experienced, optimize, and they could use different types of techniques and go very advanced on different types of machinery. But then you have someone who's brand new. Who's maybe a little frail, maybe a little bit fatigued and, and just trying to do these advanced things.

Caspar Szulc ([11:09](#)):

And in some ways it's almost a hindrance it's going to, you know, result in them getting worse. Sometimes I've seen that in biohackers a little bit where I'm around patients a lot and they try and skip the fundamentals of healing and jump into some, you know, really advanced STEM cell stuff and other things rather than trying and get themselves to a baseline of health. Do you agree with that? Would you approach someone who's in a different state of not optimized, not healthy, but chronically ill, inflamed, all of these things, lots of stress in their lives. Do you believe that biohacking has to be applied differently to each individual?

Siim Land ([11:48](#)):

Yeah, absolutely. And the difference, biggest difference would be that for the beginners, I wouldn't like prescribed them something really complex like a routine, because they're at, at that moment, they just need to do like the simplest things and they're going to see the results really fast. Like they just need to stop drinking Coke and stop eating sugar. So they're going to see all the better results even from doing like the simplest things. And for them, they don't really need to go into like a very like complex things. Like you mentioned, like the STEM cells and those are the things like the foundation in my opinion, should be to kind of fix all the minor lifestyle issues that maybe problematic, like, you know, stress and sleep deprivation and not, not exercising and overeating. And also those simple things should be the first and foremost thing that everyone should do. And then maybe like if you have established a certain baseline for your health, then then at that point you can consider like, yeah, okay. I want to take it up a notch. I want to optimize it further. And I want to like increase my other aspects of my performance or a wellbeing.

Caspar Szulc ([12:56](#)):

You talk a lot about fasting, really. You talk about diets and everything. Are there any cases which you don't recommend someone fast?

Siim Land ([13:03](#)):

Usually the fasting isn't beneficial for someone who is like pregnant, breastfeeding, or maybe like a child. So children don't need to do it as well as the like the elderly. So for them, it's a harder for them to fast. It's harder for them to maintain muscle mass from the fast and maintaining the muscle mass is a very important thing for preventing age related sarcopenia. So yeah, and, you know, metabolic dysfunction and metabolic disorder will also come from, if you start to lose your muscle mass. So just maintaining muscle mass would be like a higher priority if you're let's say above 65 or something.

Caspar Szulc ([13:42](#)):

What about its impact on hormones when you're fasting. Because a lot of patients that you see a lot of people in general, their hormonal balance is off. Whether that's due to toxicity, just poor circadian rhythm, a million different things. Have you looked at that at all? How fasting impacts hormones?

Siim Land ([13:57](#)):

It can affect like different hormones. So when it comes to fat loss hormones and like insulin sensitivity hormones, then those things improve. So you will like lower your blood sugar, you can lower your blood pressure. You can lose weight with it. And yeah, you can also turn on like the different longevity pathways in the body, like AMPK or autophagy and sirtuins and others, but when it comes to, let's say like, it's also like a stressor to the body. So it does cause stress. And if you overdo it then that excessive amounts of stress can lower, like things like testosterone and thyroid functioning. And so it does have like like a negative side as well, and, you know, you can overdo anything. So it always has to be taken at the right dose and also make sure that you recover from it with, with enough recovery,

Caspar Szulc ([14:47](#)):

The right dose and right time as well. Correct. Because I believe say you fast, differently in the winter versus summer, is that true?

Siim Land ([14:55](#)):

I personally, I don't like change a lot. I may like eat slightly earlier when it's the winter time. But yeah, generally I'm like, yeah, you, you definitely shoot also a change the fasting window and a routine based upon like what's your goals, what's your current condition and what's your preference as well. Like maybe some people don't want to like eat once, once a day. They actually want to eat like three or four times a day or something. So yeah, it's, it depends on the person.

Caspar Szulc ([15:21](#)):

To someone who's out there and listening and, and basically has been in an, I would say maybe just a, an okay. state of health, but you know, eating two, three times a day and seeing this and, and basically saying, well, fasting, just doesn't seem like it would fit me at all. You know, I'm eating the three times a day. How could this even be healthy? I feel already fatigued, you know, with such little caloric intake. What would you say to someone that's thinking about doing it, whether it's intermittent fasting or just a fasting routine and has those types of objections.

Siim Land ([15:55](#)):

Let's say like, when it comes to like energy production or fatigue, then fasting can actually increase your like energy efficiency and you know, a lot of people anecdotally report that they do feel more energized,

while they are fasting and they get less tired. And I personally did notice also like a shift in just my physical endurance, as well as like overall resilience. When I did switch over to this intermittent fasting lifestyle. So like, I don't have, like, you know, when you're fasting, then you eat less often. So you have like less of these ups and downs and your blood sugar and these ups and downs in your blood sugar they do you know, give you energy after you eat, but they also come crashing down quite rapidly. Therefore you kind of go into this rollercoaster throughout the entire day.

Siim Land ([16:43](#)):

Another problem is also that, you know, when you are teaching your body by eating the small meals all throughout the entire day, then you're never teaching your body how to burn its own body fat. When you look at the amount of body fat, our body carries, then it's not like a problem of energy shortage. We have plenty of energy with us all the time, even like, you know, very lean people, athletic people, they have tens and thousands of calories in their body fat all the time. So it's not a matter of like it's not a matter of fuel availability. It's a matter of like access to it. You're not able to access to it. You're not able to tap into your body fat stores that effectively. And whenever you do skip a meal, or whenever you do do some fasting, then you go into this energy crisis in the short term. And the way you overcome that is by promoting these ketogenic pathways in the body that conditioned about it to start using more fat for fuel, you'll be able to tap into your body fat stores very easily. You don't have to necessarily do fasting with that either. You can ignite those ketogenic pathways with like just some forms of carbohydrate restriction, as well as a exercise. It can also do it.

Caspar Szulc ([17:45](#)):

Yeah. I feel like so many people have become very inefficient with the ways they eat and their relationship with diet, meaning they think more is better. And, and what you said may seem counterintuitive, but it's very true that when you you know, limit the caloric intake, when you limit things and you go into a fasting state, you allow other systems to clean, you become much more efficient with what you do put in your body. So that's something we've seen with, with patients all the time, when you give them a healing diet, let's say that is restrictive from what they're known that tries to limit. And of course, kind of accelerate the detox pathways and just regeneration that they actually eat much less, they eat higher quality, but they have much more energy. So it's not, you know, this is the state. I think we're in, especially in America, everything's quantity.

Caspar Szulc ([18:35](#)):

We want bigger, you know, large amounts of calories, not ever looking at the quality, but the quality is what really determines it. And that's where your body will either use it for energy or store it away or just not use it at all and just slow it down. You know, that's the really interesting thing. And if you look historically, of course, on humankind, we've been fasting for, for very long periods of time for thousands and thousands of years, this is something we did, but would you recommend fasting and even exercising while sick while chronically ill, not even acutely sick, but chronically ill?

Siim Land ([19:08](#)):

I think it would have to depend on the particular disease. Like a lot of the diseases of civilization, like, you know, diabetes, heart disease Alzheimer's those things, they, they are also like in some aspects caused by this excess that the body is in this over nourished state for too long and experiences other, other imbalances. So generally, you know, exercise and well, let's, let's say exercise first that the exercise is probably one of the most effective medicine like natural medicine. There is like, it's, it can

improve your body composition, improves your blood sugar stability, it you know, improves your metabolic syndrome. So yeah, like exercise itself is just a cornerstone to a healthy lifestyle. So I think even if you are like relatively sick than even then you can see great improvements in your in your health and biomarkers.

Siim Land ([20:01](#)):

If you start to do exercise, at least in some capacity, like going for a walk, going for a hike or something that can also be considered exercise. So you just have to always scale it to your level. So if you're like disabled or, you know, you don't have, you know, very functioning, functionality in your muscles, then of course you can go, go into like a CrossFit class. You have to scale it to your level if you're not doing exercise, not necessarily, but, you know, even just going through nature has been shown to have like very therapeutic effects on like a depression, as well as inflammation and just like lowering stress levels. But when it comes to fasting, then fasting can be, it can be more dangerous than exercise and it can have more negative side effects than exercise, but it'll also, you can scale it to your level. So you know, just skipping the snacking and making sure that you don't eat immediately before bed, that can be achieving at least some effect from the circadian rhythm aspect that you do this time restricted eating that you narrow it down a little bit. You don't necessarily go for like a very long, fast, but you narrow it down. And then you can see also like similar benefits as you would with exercise, like weight loss, a better metabolic syndrome, and just overall health,

Caspar Szulc ([21:14](#)):

You mentioned they're going out into nature and not eating before you go to sleep because of the circadian rhythms. These are very much things that you want to be in tune with nature. And I do think biohacking has gotten a little bit, sometimes a bad rep for trying to do something unnatural, such as, you know, splicing gene or doing, you know, some sort of other things is your approach. One of nature first, such as an example, food first before taking supplements, like improve your food quality, or are you really trying to hack biology in unnatural ways?

Siim Land ([21:48](#)):

I, I would prioritize the nature thing first so that you should always do the fundamentals and do the easiest things first before going into like the hacks and the dirty because you know, first of all you know, although some, some hacks or some supplements they can work, they can be a, like a shortcut. They're not as sustainable as the lifestyle itself. So if you follow the right lifestyle, if you do it like as natural as possible, then you don't necessarily may need to go for the other route. And yeah, you can just maybe be more time efficient and it can also be generally healthier as a result of that. But at the same time, I also acknowledge that to a certain extent, biohacking ease, like getting away with things like you know, if you want to have a, like a cheesecake or like a birthday cake, then there are biohacks to mitigate the damage. Like you can take some maybe chromium you can maybe exercise before before eating the cake. You may take some berberine after eating or something. So there are ways of like goals of hacking it of taking a shortcut like, but it's not like it's the problem is that it's not like that sustainable. So it could work every once in a while, but I shouldn't be like the first and foremost priority.

Caspar Szulc ([23:06](#)):

You know, I have this question the other day because someone saw me and I was wearing air pods and they were talking, Oh, I thought you were healthy. That has EMF. That has, you know, negative. It's so close to the brain, all these things. And I get it, like I understand, but at the same time, I'm not one of

those people. That's not going to deprive myself the cheesecake right. All the time, every once in a while, I want to enjoy it. I wanted to work out without the cord attached to me because I was moving around a lot. And I took the picture and posted it and got a little bit of heat for being unhealthy. When I understand there are hacks, even for that, of how I'm going to mitigate EMF exposure after that, how I'm going to eat differently, how I'm going to do all these things and sleep in accordance and not keep things EMF that give off radiation around my bed when I regenerate at night.

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

So I could really appreciate that because it allows you to still be human, right? Who in the world is never going to have a piece of cheesecake, never going to indulge in something that is quote on quote, unhealthy, but biohacking, I believe in it. And just living more in tune with nature as well, allow you to do that and still be healthy so that you're not deprived. Sometimes of things like joy and happiness of having a piece of cake and not being so damn guilty about it. So I really do think that what you're allowing people to do through biohacking through these tips and techniques is to live their lives still because a lot of people and I get this. When patients first come to our center, they go, Oh, you want me to get rid of everything fun? Right? No eating this no that I can't drink as much. Well, those are the things maybe that you indulged in that got you there, but you could still do that probably after medical treatment. And I think biohacking allows you to do that.

Siim Land ([24:50](#)):

One of the best examples of it is also like a blue light exposure at night. So you know, the artificial light that comes from screens, it will inhibit your body's ability to sleep. And it lowers sleep quality by suppressing melatonin, the sleep hormone. So like, you know, optimally, we should all go to like a bed after a sunset. And maybe it was like only a candle light, but, you know, no one is going to do that because it's impractical and people just like to, you know, use their technology. So a good bio-hack for that is to use like these blue blocking glasses. So you can still use the technology, you just hack away the light environment. So you'll see like this like a redish through a reddish filter that filters out the blue light so that you don't inhibit the melatonin and you can still asleep better.

Caspar Szulc ([25:35](#)):

You know, those marker like melatonin others, whether the ones that you test and recommend testing, you know, the basically labs or anything to understand a baseline of your health, are there certain tests, labs, or just, are you using Oura ring mostly? What, what are you going with to show that you're least in a healthy state?

Siim Land ([25:54](#)):

One of the easiest things you can do in like on a daily basis is just your blood sugar or like fasting blood sugar in the morning. So if it's above 100, then that can be that's considered not good, but it also depends on like other things, like if you eat like the cheesecake and the night before then of course your blood sugar is going to be high. Generally. You don't want to have like your blood sugar high on a regular basis. And generally it's better to have it slightly low then when it comes to like the ones that you have to go to a lab for, then I generally follow like, as these overall health panels, like you measure your CRP, your inflammation you measure your cholesterol levels. You measure your triglycerides you measure maybe if I were to be like, considered about like longevity or something, then like IGF1 can be a good marker to see, like, if your IGF2 is high, then that can be at least like some high IGF1s, high IGF1 levels are associated with like some malignancies and some other diseases.

Siim Land ([26:56](#)):

But at the same time too low IGF, one levels can also be unwanted. So, yeah, I do think like the easy general overview about your like blood sugar inflammation and a fatty acid profile and cholesterol that can already give you like a pretty good glimpse about your overall health, at least like to a reasonable degree.

Caspar Szulc ([27:15](#)):

What about genetic testing? Because I know you speak about this. I agree that longevity is basically 20% determined by genetics and 80% epigenetics. And that means environment what you do. So what are your thoughts on genetic testing? Because where I've seen is patients and people getting genetic testing and then going into a state of fear because it kind of starts to show them something that they've assumed may happen. And then they start to actually realize that happening. What do you think about genetic testing?

Siim Land ([27:46](#)):

I think it can be very eye opening and definitely useful. So I have done my genetics. I think it was like a, it wasn't like 23andme, but it was something similar. And I use like the platform itself to code where they're basically analyze it for you and they give you like a report based upon your genetics so they can tell you, Oh, you have this gene, you have like a bad cardiovascular gene or something you have, or you're more predisposed to inflammation, et cetera. Or you'll have like a bad fat loss gene or a good fat loss gene, whatever. Maybe it makes it a lot more easier to understand, because if you, you, you, as an individual who doesn't have like maybe a background in those things, then you can be just confused about it, unless you have like something, someone, someone who's walking through it with you.

Siim Land ([28:31](#)):

So yeah, I think the genetics they work or they, they're going to be useful to the extent that you understand them and know how to maybe adjust your lifestyle based upon them. I find them, they can be good to know maybe like your weaknesses or something like, you know, that you have like a bad blood sugar regulation, gene or something. So then you can take some pre-cautionary measurements against that. But at the same time, you shouldn't maybe get too caught up with them either. So it's not going to be that you're destined to have some sort of a disease because you're have bad genetics. Like I said, like 80% of it is considered to be epigenetic. So the lifestyle, you follow the food, you eat the environment, you're in the thoughts you have, or like, yeah, the activity to do all those things are actually more important at the end of the day.

Caspar Szulc ([29:19](#)):

It is predisposition and not destiny, as you said. And, you know, that's what people need to realize that if there's something shows up, that is not meaning that will happen means you have a proclivity and inclination for that. So you have to be more proactive about it, right? And that's where I think it can be amazing information, but it could also be something that leads you to fear more, which is not good. So I think in, in the hands of the right person with the right professional or someone there to guide you, I always found genetic testing to be quite good, but oftentimes people just get those genetic tests and suddenly start freaking out. It's like, they've been put into this state of panic due to what they're seeing from it, but we know epigenetics is so powerful. Speaking of longevity, one of the things I know our center and our company has been looking at for a while and a lot of people have is NAD, Nicotinamide

adenine dinucleotide. You could tie essential for energy metabolism, DNA repair. And I know you speak about increasing levels. What are your thoughts on raising NAD, intravenously and orally?

Siim Land ([30:24](#)):

Well, I think intravenously is definitely more bioavailable and a more effective way of doing it. So yeah, like the oral oral supplements they, they do appear to work and they raise NAD levels, but yeah, probably not to the same extent as the IV, I think like if you were to take the oral route then the best one I come across is the NAD Goals by Quicksilver Scientific. So they have the lyposomal NMN with trimethylglycine and the lyposomal are definitely more bioavailable than the like capsules of nicotinamide riboside or something.

Caspar Szulc ([31:04](#)):

I would counter that a little bit, because we do produce NAD in a capsule formula that, that has been shown to be quite effective. But I understand where you're coming from, because NAD, I have to say is, is still incredibly under-researched in a sense because you have nicotinamide riboside is being researched by chormadex and others. That is incredibly sort of, you know, pushed in through the marketing, everything like that. But what we've realized in clinical experience, as well as that, of course, intravenously is the way route you'd want to go, but you could also get there with the combination and synergy of things like coenzyme Q10 and improve bioavailability actually. And I find it, you know, NAD is one of these really really essential things that, that is only looked at now by, I feel like biohackers and top people. What has been your experience with the research and everything you've found into, not just NAD, but other supplements and other really important molecules and nutrients for energy for cellular regeneration and DNA repair. What, what are you finding?

Siim Land ([32:09](#)):

Yeah, I do take a NAD myself as well. Like I take a nicotinamide riboside on some days as well, as on other days I've taken MNM. And I usually, I don't do that. Like every day I usually don't do it on days where I may experience like some jet lag or a sleep deprivation or something. Because then I would like want to get like a boost in NAD and then I would use it more effectively and all the other things that I may consider like really good would be like carnosine for exmaple. So carnosine is is, is it's good for like fighting advanced glycation end products. So it's also like considered like this anti-aging longevity compound. So I do take carnosine on a daily basis as well. And then of course, like you mentioned, CoQ10 is, is something that I also consider very important for cardiovascular health.

Siim Land ([33:01](#)):

Then I've been trying out like resveretrol. I know, like David Sinclair takes it on a daily basis and he says it's really important or very effective. I don't know, like the, how true it is, but at least it's not, it's not something I do think it can at least help with like some like metabolic health. Like it can help with insulin sensitivity and blood sugar regulation and triglycerides. So I do take that as well, but like one of my favorite ones is a glycine actually. So glycine is just like an amino acid and it's found to be really effective in like fighting oxidative stress and also being like calming inhibitory like, amino acid, that can help with like sleep. It increases like deep sleep, especially, and just reduces inflammation in the body.

Caspar Szulc ([33:51](#)):

Yeah, no, those are all really good supplements, I think, to take on a daily basis. What about your thoughts on minerals? Because when I talked to Dr. James DiNicolantonio, we talked a lot about, of

course immunity and, and things like magnesium and zinc and how we are so deprived and how even food is 30% less of those minerals as it used to be because our soil is so depleted. Do you supplement with any minerals or do you just try and get everything from your foods and try and eat quality?

Siim Land ([34:21](#)):

Yeah, like minerals those are super important and they basically, they're like they're driving almost every healthy process in the body, like energy production, brain function also as well as like melatonin synthesis. So yeah, you do need these essential minerals to be optimally healthy and carry out all these processes. One of the most important ones I think is just magnesium because it's involved in almost all of the, you know, biochemical reactions of the body, as well as it's the most depleted one from the soil and the foods that we eat. So, yeah, like magnesium deficiencies are rampant and at the same time you do need more magnesium when you are stressed out or the other, the more diseased you are, the more magnesium you tend to need. So I do take that one as well as a supplement. Just, just not, not because I'm that I need it for my like disease prevention or something, but just because it's so depleted from the food in general.

Caspar Szulc ([35:20](#)):

If you were starting to feel a little bit sick, or even if you were having symptoms on almost a daily basis, not saying you are, I'm sure you're very healthy and, and you know, free of disease, but what would be your go-to, what would you start doing immediately to try and change that? What would be some of the hacks and tips and techniques you would start to use?

Siim Land ([35:43](#)):

One thing that I do take on some days as a way to maybe catch a cold or like prevent a cold or prevent infections is zinc. So zinc has like antiviral properties and it also inhibits like a viral replication and in some studies like zinc lozenges, especially, especially they have been shown to like reduce symptoms of colds and reduce also the overall length of how long you stay with a cold, but you have to kind of start taking the zinc within 24 hours or 48 hours after you experienced the first symptoms. So, maybe the first thing I would do is get a good, like I have like these zinc lozenges, so maybe it's maybe 2 or 300 milligrams of zinc if I'm not mistaken. So I'll, I'll take like something of that. I'll also maybe heat up like the infrared sauna. So you know, heat can be very therapeutic against infections. So it, you know, the heat kills like bacteria and pathogens. But it can also inhibit like viral replication by turning on the heat shock proteins and adjust the sweating is also detoxifying and sweating out like the, some aspects of infection. That's what my parents and grandparents told me to do when I was a child that, you know, this wedding is goose or like, you know, drinking a lot of liquid so that you can like excrete the infection.

Caspar Szulc ([37:07](#)):

I have heard the same thing, you know, sweat is good. Of course a fever is, is a response, right? Is your immune response to try and raise the heat and kill off a pathogen virus or a bacteria. Now, before we got started recording, you know, we, we talked about how things were in Estonia during this pandemic and, and everything COVID you said it was going quite well. What do you attribute that to? And what do you attribute? How do you feel about this whole pandemic as a whole? Because you're in Estonia right now, very different than where I am in New York, where we're dealing with lockdowns and so much talk about coronavirus and not maybe enough about health and how to improve that. But what do you think you know, Estonia or Sweden or places like that have done that are allowing it to stay open and see such relatively low rates?

Siim Land ([37:54](#)):

First of all, I'll say like, maybe because there's less like people, so we're not like crammed together. Like, you know, people are relatively apart from each other and, you know, Estonians, aren't very, as well as like Finnish people. And as Swedish, I would imagine as well that they're not very huggy people, or they're not going to kiss you when you, when they meet you or like in Spain or Italy where people are, you know, really I don't know, like a warm with each other, like Estonians, they do social distancing by default almost. So they know they're not very like very enlarged groups already. So I think that that was probably like a very important factor. But also like maybe like the population here isn't as metabolically sick as the USA or the other Western countries either. Like we don't have this you know, very fast food culture.

Siim Land ([38:44](#)):

So most people do eat like just home food and they don't have like these super high hyper palatable junk foods. So they are just metabolically more healthy. Like of course there is a lot of, you know, heart disease and other ailments here as well, but it's not as severe as in the States, but it, when it comes to like the lockdowns or that kind of thing then I think people here have been let's say they've they've gone to not become like, relatively skeptical about politicians and to the governments because of like, you know, ex Soviet union country. So that's part of the reason why people are don't really, they don't take those things that seriously, or they, they stay skeptical and they tried to keep their freedoms to a certain extent.

Caspar Szulc ([39:30](#)):

No, I mean, my, my parents, my family is from Eastern Europe and Poland. And, you know, we've witnessed that as well. Just a different approach to not just governance, but to how you eat. And I think that's one of the biggest factors that you're talking about when you're looking at any, you know, metabolic disorder, it's, it's what you're putting into your body. And so much of what I remember growing up was just daily cooked meals and fresh, and everything was very, you know, plant-based of course, but of course it was meat, it was, it was meat. Potatoes are a staple of Eastern Europe in some ways, but, but it was, it was very fresh. It was very, and, you know, going into many of my friend's houses, it wasn't like that. It was just the microwave kind of, you know, dinners, lots of candies, lots of everything else.

Caspar Szulc ([40:15](#)):

And it does make a difference. It really does. And I think when you have something like a pandemic, those differences really get put under a magnifying glass. And so places like Estonia Eastern Europe in general, that, that have this a little bit different approach, culturally to food. You know, aren't going to be impacted as much. And I do feel the conversation needs to go there don't you, that we need to talk about what we're eating, how culturally we have relationships with food that's very different and how that's going to impact our health in general, not even talking about pandemics and viruses, but just health on its base level.

Siim Land ([40:53](#)):

I hope so that we do start to pay more attention to this because yeah, like I said, it's very important and it does dictate a lot of your overall resilience and yeah, just metabolic health. Like even if they're weren't a pandemic, you know, there's millions of people dying to cancer and heart disease and diabetes every year already. So that's a, that's, that's not considered a pandemic, but it should be in some aspects like

that. It's a, it's a real concern and it's not something that is supposed to be determined or guaranteed. Like it is a lifestyle disease mostly. So you can prevent it to a great degree. And there are a lot of things that you can do by just you know, starting to eat a better diet, exercise, more sleep better, and yeah, just maybe fix your nutrient deficiencies.

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

Would that be your top three things? If you were to, if you were in place of power right now to say, Hey, we have to improve our health as a country, here are three things we're going to do better. We're going to eat better. We're going to move more and we're going to sleep better. Would that be what you key on, on, even from that biohacking, mind of yours,

Siim Land ([41:59](#)):

The three, three most important things for just overall health and a better, better resilience. Yeah, that would be good start.

Caspar Szulc ([42:07](#)):

So where do you see biohacking going next? I mean, it feels like there's still this groundswell of people getting involved more and more. I see all the time on social media, on Instagram, more people are embracing biohacking, but where do you feel it's going to go next? Is it going to be some breakthrough in technology? It allows us to do more. Is it going to be just a better appreciation and more people going in on those fundamentals of sleep, diet and movement?

Siim Land ([42:37](#)):

Maybe the next decade or like the, you know, the twenties that are coming, that's going to be, I think mostly about just that like genetics, lab tests, blood work and like doing personalized nutrition and personalized healthcare based upon that. So you know, it's that's the current technology that we have and yeah, like we can use like different AI or something with that to figure out what is the best solution for a particular person and what you to do. Do you know, in a particular sense, and I maybe, maybe I would say that the access to those things is also going to just get better so that you don't necessarily have to, you know, go to your local doctor to get those things. You can start to get those things at your doorstep. And you can, you get like this, maybe like this online college where you can coordinate or synchronize your different tests together and maybe work with some sort of a practitioner or like a, some expert who knows how to like, analyze those things, but maybe like within the next few decades, then I would think that's where we're going to start to go into more like the technology space that we figure out more fancy gadgets that are actually going to be more involved with our body directly, like, you know, the neural link and some other things.

Siim Land ([43:52](#)):

I think that's going to be probably the future that we will come across in the few decades that we have like some implants or something in, in our bodies. And, you know, of course that can be that can raise a lot of eyebrows companies, and that creates a lot of conspiracy theories and that sort of thing, but I think that's, that's something like almost inevitable future that we are heading towards at least like unless something really changes drastically.

Caspar Szulc ([44:15](#)):

Okay. So would you say you're embracing that change, like the neural link and everything, or are you a little freaked out by it?

Siim Land ([44:22](#)):

Of course there is some concern. And I, I like I think there is always the danger that if someone is you know, controlling your body, like if they are inside your body, like if there is something technology though, someone can always hack it and, and do what else it may be. But at the same time, I think like people will just voluntarily accept it or embrace it because like, because they like the convenience and the everything else that you get will be just the people will prefer that over, like their sense of security over some privacy.

Caspar Szulc ([44:53](#)):

Of course. I mean, you look at it right now when we have any issue or problem, we just want a pill to make it go away. We don't care what those pills side effects are. I mean, look how many people, especially in America on pharmaceutical drugs and multiple ones with very hard side effects, but that's the go-to. So I don't see much of a resistance, really, if you're ready to put a pill that has serious side effects in you, why wouldn't you be able to, you know, be against technology? Me, myself, I'm a little bit more of that purist in like Waldoo Emerson and Thoreau of, I want to be with nature. I want to, you know, what, I came into this world with that. So I want, I don't want any extra pieces or anything like that, but everyone's different. And I do embrace technology, and I do think there is a fine balance and you could find it between technology and nature and living in a, in a natural way.

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

And that's where I feel people should be looking for not to say against technology technology is wonderful, but also not to say, I think a lot of what we've seen in this pandemic is a lot of us are living unnatural lives and that leads to an unhealthy, you know existence because we're, we're living in these concrete jungles. I mean, I live in New York city. I get it. I'm not knocking people that live there, but I am saying it's probably not the healthiest and I do need to escape to nature as much as possible to recharge, to reconnect and do that live in that balance. So I think a lot of what biohacking is doing also, if you're really approaching it the right way is trying to find that, that balance as quickly as possible. Right?

Siim Land ([46:26](#)):

Yeah, Absolutely. I, I agree that like a balance is key and you, you, you know, imbalances then to just create disease and other problems. So yeah, we can go off balance for a short while, but if we were like chronically out of balance, then like it's either, like, it could be possible to like resist it and fight it. But sometimes it's just easier and more effective to just go with the flow, which would be like you know, embrace the natural little things and go back into balance.

Caspar Szulc ([46:57](#)):

So what's next for you Siim, well, what do you have on board? Are you doing, I mean, with the pandemic, I can't imagine you're traveling and doing too many talks right now, but another book on the way, what do you got going on?

Siim Land ([47:07](#)):

On a daily basis I am like just writing gang, creating content, and I am like Dr. James and I, we have also considered to write another book about minerals. So yeah, that's what we're doing. And next to that

time, I've also you know, helped to make, or like start in this upcoming documentary, or like a movie movie-thing about biohacking, especially about stress. That's also going to be coming out with maybe 20, 21 some sometime. But yeah, other than that just, yeah, there's always something to do. And yeah.

Caspar Szulc ([47:39](#)):

There's always something, especially, like you said, when you have a passion, you've been doing this since 21, I'm sure you have a long list of things you're doing, and I can keep you busy to the end of time. So, but it's awesome that you're really going after that and spreading this wealth of knowledge that you have with everyone. So thank you for that. Where can people learn more about you and what you're doing?

Siim Land ([47:59](#)):

Yeah, thanks for having me on my website SIIMLAND.com and all the social media platforms. I'm also Siim Land.

Caspar Szulc ([48:07](#)):

Yeah. And that's S I I M L A N D, right?

Siim Land ([48:10](#)):

Yeah.

Caspar Szulc ([48:11](#)):

Okay. Yeah. So go there and check it out and start to apply bio-hacking your life. I think it's incredibly valuable. And, and when you get to know what you're realizing, this is just something that we've been doing for a very long time, finding ways to improve health as quickly as possible, live longer, live happier, and those are things we should all strive for. So Siim, thank you so much for coming on and all the best to you and everything you're doing in the future.

Siim Land ([48:35](#)):

Yeah, you too. It was a pleasure talking with you,

Caspar Szulc ([48:37](#)):

Healing in a sense is simply changing or hacking our bodies back into homeostasis. So the idea of applying biohacking principles to medicine seems to make a lot of sense. Siim made it clear that we have a lot of different ways to optimize our health and that many of those can be used by those suffering from poor health together in conjunction with a comprehensive medical plan as personalized to each patient. It seems then the future we'll see the gap between biohacking and medicine continue to diminish. At least that's what I'm hoping. Check out Siim's books to learn more about applying biohacking techniques in your life. And remember that you are your own greatest healer.

Speaker 1 ([49:24](#)):

[Inaudible].