EP\_1241\_PETER\_DIAMANDIS\_AUDIO

**Peter:** [00:00:00] There is a very high correlation between your beliefs, your mindset, and your physical body. Optimists live 15 percent longer than pessimists.

**Dave:** You and I can both do two to four weeks of reading papers in 10 minutes. Doing anything intentionally that hurts for a minute or so, up to three minutes, it changes dopamine sensitivity.

Throughout the rest of the day, it takes less dopamine to motivate you, so you're happier and you're less stressed all day long.

**Peter:** 99. 9 percent of the world have no idea what's going on inside their bodies. And one of the things that's important to realize is your body is incredibly good at hiding disease.

You don't feel cancer until it's stage 3 or stage 4. For

**Dave:** you, what's the highest return longevity? You're listening to the Human Upgrade with Dave Asprey.

Today's guest is none other than my dear friend, Peter Diamandis. I got to know [00:01:00] Peter more than 10 years ago when I went to, I believe it was a 2014 Abundance 360 meeting and very quickly found myself at JPL. With Peter as he led a tour as I held lunar rovers and met the guy in charge of stopping asteroids from hitting the planet and toured SpaceX and met Elon and went through this just incredible experience of looking at the future of technology.

And I've been attending Peter's events ever since. Uh, and one thing that I love about Peter and that you're going to love in this episode is that Peter actually is a rocket scientist and a medical doctor, and he's one of the few people out there who can legitimately say he's been in the longevity space longer than me.

I've been doing this for 25 years, starting with a nonprofit in Palo Alto, California in my mid twenties, and Peter's got 30 years of working in longevity, which culminated. Very recently [00:02:00] with the XPRIZE foundation of which I am a donor and He did a hundred and one million dollar health spend XPRIZE to award Any kind of group out there who's working on longevity if they can hit specific goals, they'll get a hundred and one million dollars to Spur innovation.

So with no further ado I think that was a pretty good intro other than your new book on longevity called the longevity guidebook Peter Welcome back to the show

**Peter:** Thank you, Dave. It's always a pleasure. It's like hanging out with friends with your buddy here. And, uh, I'm excited to learn as much from you as I'm excited

**Dave:** to share with you.

We always have the most fun, and I've, I've been on your stage, you've been on my stage, we've recommended each other's books, and I feel like we're, we're brothers in this how to make the world a better place in multiple directions at the same time. So I want to go deep with you on the stuff you're doing around longevity, both for yourself and for others, so that our listeners can learn, and I can learn, and we'll [00:03:00] compare notes and.

I can, uh, make fun of what you're doing. You make fun of what I'm doing in a brotherly, happy, happy way. Like, why would you do that? I don't know. Here's why. And so we're both going to learn a lot and our listeners are going to be blown away by one of the smarter guys out there, which is you. Thank you, bud.

So how long have you been tracking your sleep and how do you do it?

**Peter:** Listen, I've been on a longevity journey a while, but I've been Really tracking things in a much more aggressive fashion. This last decade, I was one of the earliest investors in aura. And I don't know if you remember when aura was not this little fine, it was a giant, like a beetle sized thing on the top of your.

Finger to be able to cram enough battery life and enough electronics in there. And, you know, obviously all things go exponential and it's gotten higher fidelity in it's recording and, uh, longer in it's battery life and smaller in all those ways. At the end of the day, I've [00:04:00] been recording my sleep using Aura for, I don't know, since they started.

I recently bought a, you know, an H sleep bed as well, which is much more optimistic than my Oura ring, by the way. It's like

**Dave:** That's helpful. I, I was the, let's say, ChiliSleep launched on my podcast ten plus years ago. I invested in them and they exited. And I've had, I've had a number of ChiliSleeps over the years.

Yeah. I think mine just sprung a leak and it makes weird noises, so I'm getting an H sleep. Next. And 8th Sleep's been on the show. And right now I'm wearing an Aura Ring and an Ultra Human Ring, which is a new competitor, and I actually think I like its data a little bit better. Sleep Space. I've been an investor and an advisor there.

I think you have the best algorithms right now, even to take data from your ring or your watch and give you more close to hospital grade. So it's exploded. You've been doing it for 10 years. I have 17 years of sleep data because I used to sleep with a headband because my sleep was so [00:05:00] crappy. And the headbands are much less Victoria's Secret approved than your ring.

But I just was like, I'm so bad at this, especially when I was starting Bulletproof and working full time in tech. And, like, I, I just got it. Get good. So how good is your sleep? You have 10 years of data. Are you good at sleeping? I think

**Peter:** my sleep is excellent. Not perfect but excellent. And it's varied.

I mean, there are periods of time where my sleep was crappy and where I ended up having brain fog as a result of that. And I'm like, man, I am so off my game. And I think one of the things that people need to realize is, you know, sleep is a absolute fundamental. It's as, as Matt Walker who wrote an amazing book, why we sleep talks, it's, it's the foundation upon which exercise diet mindset, everything else is built on top of that.

If you don't have your sleep in order your, your suffering. So, you know, I track very carefully in particular, my deep [00:06:00] sleep. Over REM and, you know, and I write about this in longevity guidebook at length. And, uh, you know, Matt Walker is when I recorded my longevity guidebook, um, audible, I put interstitials between every chapter and I bring in a world expert to talk about the field with me between the chapters.

And Matt Walker does the audible conversation after the sleep chapter. But at the end of the day, deep sleep should become, is the early, early period of your sleep, right? If you're tracking your sleep on your Oura Ring or your eight sleep or equivalent, you'll see you're in deep sleep at the beginning of the night, and then you're in REM towards the back half of the night.

So if you shortchange yourself on sleep. You're typically hitting your REM versus your deep sleep. But deep sleep is critically important, as you know, for our ability of our brain to clear proteins and tangles and all the [00:07:00] stuff that is problematic

**Dave:** later as you age. Now you said something, and this is one of my favorite things to do ever.

So I've seen you on stage. In front of 500 people at the Abundance 360 meetings forever. And you're always saying, think bigger. Like, like, think bigger. What, what game are you playing in the

**Peter:** world? How big are you going in the world?

**Dave:** Right. In fact, I, I quote you in Game Changers, one of my books on personal development about that.

Like every time I think that I'm thinking big, as someone's gonna step up, usually you, and say, no you're not. But in a kind and gentle fashion. Yeah, kind and gentle. But I, I got to push back, Peter, when you say

**Peter:** sleep is fundamental. Why does it have to be? So these are interesting questions, right? Why is eating have to be?

Why does sleep have to be? Why do all these things have to be? And it depends if you're accepting the the software code. That developed over the years, or are you able to rewrite it or hack it in some fashion? Well, I'll, I'll [00:08:00] push back in the following way, you know, during sleep, you are the most ineffective, most unproductive, most open to predation, and we ran this multi billion year evolution game and no one ever eliminated sleep.

Even earthworms, earthworms have this period of reduced activity that looks like sleep. But humans homo sapiens for the last couple hundred thousand years, depending on when you think homo sapiens came into existence, if we had been able to evolve away from sleep, any sub tribe that could have evolved without sleep would have been more productive, more reproductive, more, less, less, you know, less dead from predation.

It would have, those genes would have been passed along at a significantly advantaged Darwinian fashion. We haven't seen that. So I think there's something [00:09:00] very fundamental going on during sleep. Whether it's the quantum functions of your neurotubules in your brain connecting with the universe, I don't know.

**Dave:** I love it that you said that. Yeah, the quantum microtubule effects in sleep are really important. And when you give someone sedation, it turns off their microtubules, which would be fundamental to consciousness, right? Yeah. Now We know dolphins have half their brain that sleeps. I wish. I would love that.

Yeah. Half my brain. And we know the genetics, there are a few people out there who have genetics that means they require less sleep than average. There are, there is,

**Peter:** as Matt Walker says, if you take the percentage of humans that require less than six hours of sleep, and round it to a whole number. It's a

**Dave:** zero.

But six and a half hours, in all the research I did, the people who live the longest are six and a [00:10:00] half hours, but it's good sleep because healthy people need less sleep, not because less sleep makes you healthy. There's also another thing that you might not have come across. Please. We're just thinking big here.

Okay. Love it. So you and I both know that some of the best rocket engineers come from Russia, right? They came originally from

**Peter:** Germany. And then post World War II, at a Punamunda, which is where the V2 was developed, um, the German rocket scientists were divided between America and, and the Soviet Union back then.

And that really gave birth to both Moon programs and

**Dave:** The Russians though, they're also powerful biohackers and they think about longevity and medicine very differently than the West does. So sometime back in the space program, and probably in the 60s if my memory serves, some enterprising Russians, they're like, well, it's a, and I'll use my accent, it is very [00:11:00] expensive, you know, to send human body to space.

That was probably not a good accent. But so the first thing they did is they said, well, Why would we ever pressurize a jet plane? Why don't we just make the pilots pressure resistant so they developed a way to make Pilots perfectly able to function at 15, 000 feet elevation. So as long as the Jets don't go over 15, 000 feet They don't have to pressurize the cabin and they can save a ton of money.

Was that just a pressure suit? No, actually it was training the hemoglobin Uh, in the blood using intermittent hypoxia, which is something we use at upgrade labs today. And it's, it's high intensity interval training for oxygen carrying capacity in the blood. And it highlights the, the perspective that Russians had on like, well, let's just hack the pilots.

**Peter:** I love that. In fact, the Russians, you know, here in the United States, we created the Fisher space pen that could write upside down and zero gravity. And the Russians used a pencil.

**Dave:** [00:12:00] It's such a great example. And at one of your events, actually, I got to ask the president of SpaceX, like you harden electronics for space.

What are you doing to harden astronauts for space? And she's like, in 17 years, no one ever asked me that.

**Peter:** I love that. It's a great question.

**Dave:** Well, what the Russians did years ago is they said. You know, we waste eight hours a day on sleep, and for astronauts, we have to send another 33 percent of our people just so they can sleep in space, and we think that's wrong.

So they developed the Russian sleep machine, which means you run a small amount of electricity over both ears in a structured wave, and you can get a full night's sleep in two hours. And I actually have had a machine that does that since 1997. Oh, how much do you sleep, Dave? I actually sleep in reverse.

So I actually get time back every, no I'm kidding. Um, my average has been six hours and 32 minutes per [00:13:00] night for the vast majority of the last 17 years of tracking it. And in the last year or two, I kicked it up to seven on average. And here's the interesting thing though. So, I go through cycles of using a Russian sleep machine, not to sleep less, but to sleep better.

And I haven't used it in like two years. And then I moved to Austin when I was growing up. Oh, there it is. It was in a box. And you and I both have probably a warehouse full of biohazards. Oh my god, of stuff. Gizmos. Yeah, we just don't have time to use it all. So I get this grain, I dust it off, find some electrodes that are still kind of sticky, put them on.

And that night, I got nine sleep cycles, six full cycles, and three partial cycles. And it was substantially higher deep sleep than I've had in a while.

**Peter:** So what is your typical deep sleep and what have you, what did you attain with that? Because, again, REM is great, but deep sleep is when your, your glymphatic system, [00:14:00] which is the sort of, sort of, the system that clears junk from the brain is most active.

**Dave:** For sure, I also prioritize DEEP over REM. REM is good for memory consolidation and things, but Yes. You only have one, you, you want DEEP. Yeah. So for Deep, like you said, you go to bed earlier, you don't eat three hours before bed, and you prioritize darkness. Yes. And, you know, I've run TruDark, my glasses company that makes something far beyond blue blocking glasses, and for me, that was what shifted me to having a normal circadian rhythm.

**Peter:** By the way, I love TruDark. I have a number of pairs, and it's incredible. I, you know, I travel with it, I use it you know, all the time. It's my safety net. For for getting myself ready for a great night's sleep.

**Dave:** Oh my gosh, so thank you. I flew to, I think it was from Austin to Switzerland. Wearing the glasses, the TrueDark glasses the whole time, and I got seven hours of sleep [00:15:00] with two hours of deep sleep after I landed, crossing nine time zones.

Nice. And I can't do that unless I control the color of light. So I prioritize it. By the way, you're, you're wearing, so there

**Peter:** are two versions of TrueDark, right? There's the yellow lens and then the dark blue blocking lens. Yeah. When do you, when do you use

**Dave:** each of them? The yellow lenses are during the day, indoors only, to block super bright LED light.

It only blocks under 490 nanometers, so I'm blocking the stressful toxic blue and allowing the blue that wakes you up to come through. So there are partial blue blockers during the day. Full blue blocking during the day, you don't wake up and then you don't sleep well at night. And then, after the sun goes down or at least an hour before bed, I'll put on the TrueDark glasses designed for sleep.

And that has shifted me from being at 2am bedtime, which I was until I was about 40. I just, that was always my bedtime. I'm an engineer like you, you know, we stay up late and get stuff done. Throughout

**Peter:** college, graduate school, [00:16:00] medical school, I was in the same thing. I'd be, I'd get into my creative, productive time between 11 p.

m. and 2 a. m. And, and all of that is switched now. Now I am in bed at 9 a. m. and asleep by 9. 30.

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**Dave:** p. m. I hope

**Peter:** you mean. 9 p. m., yes. The Empire. 9 p. m. I sleep by 9. 30 p. m.

**Dave:** So you're doing better than I am. I recognize that, but I have a girlfriend. So I'm more of a 10. 30 guy, but if I go to bed even by 10, I do get more deep sleep.

My goal is 90 minutes. I get that quite a lot. And never less than 60 minutes, unless I did something where I deserved it. What do your numbers look like?

**Peter:** last night, my, uh, deep sleep was an hour and 34 minutes. Nice. Uh, yesterday, an hour and 11 minutes, the day before that, an hour and 25 minutes.

Yeah. So it's, it's

**Dave:** typically in that realm. [00:17:00] Got it. So we're, we're sleeping about the same amount and I think that's fundamental. I do know that I, if I run a small current over my brain, sometimes I get more deep sleep, heart rate variability is higher and it's, there's all kinds of benefits to microcurrent stimulation of the brain.

It probably even affects microtubules for all we know.

**Peter:** Yeah. One of the things that I did in, in the recent book was the books divided into chapters on, Diet, sleep, exercise, mindset, routines don't die for something stupid uploads, and, and meds and supplements. And I wanted to make it very actionable how to.

and so literally write out exactly what I do, why I do it, what the science that backs it up. And it's meant to be because, you know, Tony Robbins and I were on your podcast and we talked about our book life force, which was 700 pages. It was New York Times for like eight weeks straight, which is [00:18:00] amazing, but it's hard to consume and remember a 700 page book.

And so, longevity guidebook was intended to be really like you can just turn to any chapter, read a couple of pages

**Dave:** and take away something instantly. I love that approach. biohacking world, which definitely includes longevity, if that's your biohacking goal. Is that people say I'm so stressed because I can't do everything and like you don't have to everything you're going to open it up and you're going to find three things that look interesting and when you do them, you'll get a return on that investment and you'll have more energy and then do some more and it's like evolving a path and a stack and you may get to a point where you say, well, I was going to do option number seven.

I don't need it anymore because option number five worked. So I'll just skip to option number 10. And you only do the things that have the highest return with the least work for you. What's the highest return [00:19:00] longevity thing you've ever done? Wow.

**Peter:** So I personally think it's my mindset work. Beautiful.

I think it's my longevity mindset work. And I put a whole chapter forward. Can I take a second and just explain it? Yes. Yeah, because I think it's really important. There is a very high correlation between your beliefs, your mindset, and your physical body. And, and you know this, the work you do with 40 Years of Zen.

The books that you've written, you know, harder, not smarter or smarter, not harder. Uh, and you know, there's an interesting study that was, was published in the national accounting of science that said it was a study of, I remember the number 69, 000 women and 1500 guys. Cause one of the only studies that was a lot more women than guys.

And the study basically said, listen, optimists live 15 percent longer than pessimists. It was like, [00:20:00] that is such an awesome stat and it is such a double dividend situation. The longevity mindset is the following. There has to be some reason why you don't dive into the ice cream at night before you go to bed.

There has to be some reason why when you get up in the morning you don't dilly dally, you get dressed and you go to the gym, right? I mean, not being lazy, right? Longevity is a commitment. It's a commitment. And so why are you making that commitment? What is it? That that empowers you to do that, incentivize you to do that.

So longevity mindset says we're on the verge of a health span revolution. That, and I truly believe this that over the next five to 10 years, We're going to see the most extraordinary breakthroughs coming from AI, single cell sequencing, CRISPR gene therapies. We can go deep into all of those if you like, that are going to extend the human health [00:21:00] span by decades.

Right? This is the whole purpose for the 141 million I raised two years ago to launch this HealthSpan XPRIZE. 141? Did it go up from 101? Well, it's 141 I raised. There's a hundred and one million dollar primary purse, a ten million dollar secondary purse, and thirty million of operations. Beautiful. Okay.

But still, that was a long road to raising that. But, and so what, what this means is That if you believe that we're on the verge of this healthspan revolution and you want to stick around To be part of it, right? This is the most exciting time ever to be alive And if you want to be there to intercept all these benefits coming you want to keep yourself in maximal health You want to be the last person dying before this revolution hits?

So I had a friend of mine in the eighties who I cared about very [00:22:00] deeply, my co founder of of International Space University, a guy named Todd Hawley, who passed away from HIV. And he passed away like a couple years before the drug cocktails came out, right? And so I think about that. I think about, so longevity mindset for me is I believe without any question That we are making such extraordinary exponential progress that I want to be in the best possible health to intercept those technologies.

And it's that motivation that, and plus feeling at the top of my game, I feel better than I ever have. I'm in better health than I've ever been, my muscle mass, all of that. It's what keeps me from, you know, eating that slice of chocolate cake, or you're partying all night, or not going to the gym. So that's the longevity mindset.

If you believe this is coming, and you love life, you're going to want to maximize your longevity potential.[00:23:00]

**Dave:** I think your longevity mindset is something different, Peter. Okay, what's that, pal? Now, I know you pretty well, and you have this giant brain, right? And we talk about mindset, but When I describe you to friends, uh, who, who don't know you, I say the same thing about you and Naveen Jain, another one of our, our good friends who I do a bunch of stuff with, with IOM.

You're both like little boys. It's true and it's a huge compliment and I think I've seen both of you just like you get so excited and I see you on stage like look at all this cool stuff and you have curiosity that never left seventh grade and I think that's awesome. Fundamental to longevity is just being so curious about the world.

Like, look at all this cool stuff. Like, don't you see what's going on? And so many people lose that. And there are even studies that show having a young mindset, and this is [00:24:00] different than I thought about it. I decided it was worth it to invest my time and energy in going to the gym. I'm going to brain muscle my way through it.

And you're like, don't you know how much fun we could have? We could make all this cool stuff. And it's such a different vibe. I think that's more fundamental than the laziness.

**Peter:** All right. Well. Fair enough. I, I, I have that other curiosity beginners mind mindset as well. And this is the most exciting time ever.

And I feel like a kid in the candy store right now on what's going on in AI and biotech. And we are living during the most extraordinary time. And we're in the midst of a health span revolution, and we should take care of ourselves so we can intercept that tech.

**Dave:** Amen. What single technology has you most excited in the longevity space?

**Peter:** Oh, without question, it's the impact of AI. I mean, it's interesting, right? So, I'm deep in AI. I've got a large venture fund investing in AI. At the same time, I've got a venture fund investing in longevity and biotech. [00:25:00] And what I'm seeing is, you know, our, we have 40 trillion cells in our body human cells.

And then there's another. You know, 40 to 100 trillion other, you know, bacteria, viri, fungi on our body. And we're a massively complex Organism, you know, a superorganism, and each one of those cells is running on the order of a billion chemical reactions per second. Uh, and there's no way for any human physician to understand that, but AI can.

We just saw Demis Hassabis and, um, and John Jumper at DeepMind get the Nobel Prize for their work with with AlphaFold. Uh, and from there, Alpha Fold 3 to Alpha Proteo, and where Demis wants to take it next, this is the CEO of DeepMind, which is Google's effectively AI division, [00:26:00] where Demis wants to take it next is building an AI model of an entire human cell.

But let's take it a step further and let's build an AI model of Dave's human cell. And so we know, with precision, how this molecule is going to impact your cell. And then, can we go from that to an AI model of a tissue, an organ, entirely of Dave? Right. And so all of a sudden, we're able to understand you in such precision that we can understand what aging process is going on, how to slow it, stop it, reverse it.

And so AI is going to do that for us in a, in a big way. So that's, that's what I'm most excited about. How about you?

**Dave:** What are you most excited about? Definitely AI is the, the sum total. We're using AI on people's brain waves to study consciousness at 40 years is then. We're doing it on people's exercise physiology at [00:27:00] Upgrade Labs and it's unlocking so much knowledge to the point that you and I can both do two to four weeks of reading papers in 10 minutes today.

And I, I've had so much learning just where I'm thinking about pathways and new approaches and I just feel like I biohacking because I had a friend with a cyclical vomiting, which is a very complex condition. Every six weeks, you spend three days throwing up very frequently. It's brutal. and I was like, all right, I got this.

It took 12 minutes of working with AI to figure out exactly where she was deficient. Wow. And got her the supplements and. She said, why in 20 years of working with doctors all over the planet has no one done this? Because they didn't have child GPT. Right, and it's, it's one of those things where I would have gone deep on the papers and packed a bunch of pathways and figured out which enzyme, and oh my god, it's so [00:28:00] beautiful.

Yes. So that's number one, but number two is gene editing. I'm an advisor to. Uh, mini circle. I've had the full statin gene therapy. I'm about to go get the clotho gene therapy. Ah,

**Peter:** nice. I'm excited to hear how, what your experience of clotho is. What's that? I'm pretty excited. What do you think about clotho?

Well, I think it's a critical thing for us to impact. And there's very few ways to do it. There's an electrostim suit, but the ability to actually up level my clothogene expressions?

**Dave:** I'm all in. I wrote about clotho in Superhuman as one of these promising things, and a friend was working on synthesizing it so you could get it for injection.

But it kept clumping and he couldn't make it work and there's a cloth of face cream I've had the founders on the show and it works and I know a few people use cloth erectile. What does it do? I mean in the [00:29:00] studies it affects wrinkles and skin aging and things like every skin cream seems to do I do feel like it, it makes a difference.

I, I use about five different things on my face that I mix all together in a little jar because I'm lazy and then I smear it on and they're all mitochondrial stimulators or peptides or things like that. And I, I do think that that is one that has enough evidence for it, that it's, it's a good idea. Yeah.

I use the one skin product, which I really enjoy. That is also in my little mix. I love the one skin way of thinking. So I use one skin, I use clotho and several other, other things. Spermidine no, not spermidine urolithin A from timeline. And then I do some other stuff that's. A little outside the box.

One of the most impactful things is topical estrogen, believe it or not. Really? And it's not very much. It has no effect systemically. It just has a local effect. But esteril and estradiol in combination in very, very low doses has had a really good [00:30:00] effect on, uh, on my skin. Um, melatonin, methylene blue, like, you know, I, I kind of smear everything that might work.

Getting the bath tub. Yeah, a little bit of tallow, you know, all this stuff. So you use only one skin on your face? That's it. Yeah. Yeah, I really like their products and it's on my face every day.

**Peter:** I'll look into the cloth, though, skin cream. Yeah, you said, you said gene editing and I agree. I mean, the other area that is related is epigenetic reprogramming, right?

So there's at least three billionaire backed epigenetic reprogramming. And for those who don't know, you know, your epi, you have So, you have basically 3. 2 billion letters from your mom and your dad, and I speak about this in the book at some extent, and your code is what you run from birth till death.

And your code doesn't change over time. So why do you change? Why don't you have, you know, a six pack at 80 [00:31:00] that you had when you were 18? It may be you and I will, but that's a different story. Right. And it's your epigenome, epi from the Greek word for above, which is what genes are on, which genes are off, matters more than what genes you have.

And, and the ability to turn back the clock, to turn back to an earlier stage of what genes were on in your youthful self I find that promising and fascinating.

**Dave:** What do you think will be the most promising epigenetic reprogramming technique?

**Peter:** Well, I mean, right now it's using, I mean, the technology is using adeno associated viruses and gene therapies.

To put in basically they're, they're using Yamanaka

**Dave:** factors. That's genetic reprogramming though versus epigenetic reprogramming?

**Peter:** No. Well, the, no, the Yamanaka factors are, so there are four Yamanaka factors for which Chinua Yamanaka won the Nobel Prize. Which we're able to take a [00:32:00] cell from a differentiated cell back to a pluripotent stem cell.

Yeah, to de differentiate it. Undifferentiate it, right. And it could become, so your skin cell becomes a stem cell, and then it can become brain, muscle, kidney, whatever you want. But what they found was if you only use three out of the four Yamanaka factors. You can not de differentiate it, but you can, I'm going to use a term out of context, you can euthanize it.

You can make it more youthful. I, you know, I hate the fact that euthanize means that it should be making more youthful. Anyway David Sinclair has done incredible work. I hate the way he's been slammed so much recently. And me too, I've had him on the show several times. He's a gentle, gentle soul and he really is working hard to make the world a better place.

And he's been discovering, you know, gene therapies for reversing epigenetic age. But he's also been researching and he's made some claims recently. Excited to see [00:33:00] the data, excited to see it move out of mice into larger animals and eventually humans. Of, of chemicals, meaning pills you can take that can genetically, you know, reverse your epigenetic age.

I just think there's a there there. I mean, there's a reason why some people live healthfully over 100 and some are dead at 60. It's not random. There's real data there, and we're going to start to discover that.

**Dave:** There's incredible opportunity with things like peptides and chemical signaling. I'm actually most excited about light and magnetism as ways to epigenetically reprogram cells, and we have some really shockingly powerful stuff at at Upgrade Labs.

**Peter:** I'm still pissed. I had an Upgrade Labs literally across the street from me in Santa Monica. And it got shut down, so I'm still waiting for Santa Monica to reopen.

**Dave:** It'll [00:34:00] happen either in or close to Santa Monica. We're talking to a few franchisees who are interested in the L. A. area, so. And we've got a new tech stack.

That includes some light therapy stuff. It almost just doesn't make sense when you see the, um, the effects and it, is it talking into microtubules, is it talking to fascia there's various theories even, but the, the result sometimes when, when you run certain patterns of flashing lights, you know, there's the, the 40 Hertz that breaks up Alzheimer's, Alzheimer's tangles, Research out of Harvard, but there's a bunch of other ones and I'm thinking, Oh, wow.

There's this whole way to get a signal into the body and one of them is chemicals or peptides and To introduce these Yamanaka factors. So I'm I'm doing everything I can just like you I've got my I think almost 10 years ago I banked my fat stem cells and then I have 2 billion of my marrow cells also banked so that we can genetically reprogram those and put them back in with X Men powers.

**Peter:** [00:35:00] Uh,

**Dave:** I love that.

**Peter:** Tell me more about the light. Is it a particular frequency or particular, I mean, is it red light therapy? What, what are you doing?

**Dave:** I started one of the very first red light therapy companies and light has based on the frequency of the light, the color of the light. So there's 660, you know, 880, and there's various chromophores in cells that are targeted by very narrow spectrums of light.

So there's two colors of red and infrared that we know about. There's also effects from amber light which are different. And those are for small blood vessels and, uh, small wrinkles and collagen. So we do those at TrueLight. But then when you go to Upgrade Labs, we also have green, which has a different effect.

Just the color of the light does something all by itself. And they do different things based on the color. But then you take the light and you pulse it. And it's pulsing so fast you don't see it pulsing. But it has a different biological effect when you turn the lights on and off. And you could never [00:36:00] do this with incandescent lights.

Only lasers or LEDs have the, the physical characteristics to be able to do it. So when you're We'll say flashing the lights in the right pattern. It has clinically relevant changes. So things like cognitive function, and a bunch of other metabolic parameters. So it's, it seems like science fiction, except the clinical studies are very meaningful on that.

If you had

**Peter:** to choose a red light therapy, from the consumer standpoint, because I do use red light therapy every morning. I use it in my mouth, on my head, in my body.

**Dave:** What would you use? It depends on the price point. So at the lower end and affordability, that's why I started true light. So I'm very biased because this is my company.

And true light does amber two colors of red and infrared, and it's meant to be affordable and it works very well. So I, I use that most often because, well, I get as many as I want from. And is that panels [00:37:00] that you sell? Yeah, four. There's a 14 inch panel and the three 14 inch panels stuck together. So you can hang those on a closet.

It's the way you would use any of these things. There are other companies that make much heavier metal frame things. They have fewer LEDs that are higher powered. We have very high powered LEDs, but, but there's more of them. So our combined power outputs are similar, but it takes less cooling and all of that.

So there's an efficiency thing. If price is no object, you know, you can spend 20, 000 on a home panel. If you want to, that includes some ultraviolet. Or you can start moving into lasers. And I use lasers on my head. When I travel, I don't. I just use the TrueLight on my head for hair growth. But when I'm at home, I'll use a 5, 000 laser cap.

But it's five grand, which is out of reach for most people unless they're really serious about it. But lasers are more effective than LEDs, but they're not more effective per dollar. And when I fly, I use a battery powered flexible thing whose [00:38:00] name I don't even remember. Shoot, it's downstairs.

For your scalp? Actually, I use that one. It's about this big, and I'll put it over my chest. And it's got infrared and reds because you get so much blood thickening when you fly. I might as well undo that on the go so I'll, I'll maximize my exposure like that. What do you use? I

**Peter:** use a red light panel it's a full body panel.

I basically stack it, I put on a red light cap, a red and blue light mouthpiece for reducing bacteria load in my mouth. I mean, one of the things I'm spending a lot more time on is My oral microbiome than ever before, and I do use Viome toothpaste and Viome probiotics in my mouth. But then they, uh, twice a day I use that that mouthpiece, and, and so I stack the full panel mouthpiece and, and cap while I meditate.

Uh, I just got a a small in home infrared sauna, which I'm going to add to the, uh, [00:39:00] process. I mean, it's interesting, right? You know, for me, one of the most important chapters of the book is routines. Yes. And a routine and a habit is the mechanism by which you do not negotiate with yourself, right?

It's like, this is who I am, this is what I do this is my routine. And we, you know, humans like routines. When you, when you sort of do it enough times, it feels comfortable. So, you know, I lay out my routine from 5. 30 in the morning through 9. 30 at night and includes a red light stack, meditation, writing, exercise.

Taking the kids to school type of thing

**Dave:** routines are so good And I used to try to do the same routine every day because that's the easiest routine ever But I found that a lot of the things don't work if you do them every day Like is it boring like well, that's not that it you're lifting heavy every day.

You'll over train I set aside 45 minutes to an hour every morning to do [00:40:00] some biohacking and it usually includes infrared sauna Or I have a, we'll call it a turbocharged hot tub. And the idea is how rapidly can you increase body temperature. Right. And I also in, in heavily meditated my new book I introduced this new idea in the field of longevity and personal development and it's called bicep and it's not, you know, this kind of bicep, it's brief intentional conscious exposure to pain.

And when you look at something like a cold plunge. Uh, there's two different sets of benefits from it. One of them is you get a hormetic stressor, cold shock proteins, and metabolic benefits. But if it's cold enough, and colder is better for this, and it's uncomfortable to do it, doing anything intentionally that hurts for a minute or so, up to three minutes, without causing any actual damage, it changes dopamine sensitivity.

So throughout the rest of the day, it takes less dopamine to motivate you, so you're happier and you're less stressed all day long. [00:41:00] And this is why monks used to whip themselves, they would self flagellate. Not because they hated themselves, it's because it made them better. It's why monks lay on beds of nails.

That's why people eat jalapenos and wasabi and even why people get like, like when they're dealing with really big stuff, people get tattoos. You see a lot of addicts with tattoos. You also see a lot of addicts doing cold plunges every day because they've recognized that exposing themselves to non damaging pain is actually an act of self care, not an act of self harm.

And having better dopamine sensitivity is part of living a long time without Parkinson's. So, what do you do? The whipping, of course, I meant. I mean, obviously. I hire someone to do that for me. If there's a There is a chapter in Heavily Meditated called Go Spank Yourself, and I do say, look, I don't care how you want to get your short dose of pain, as long as it's conscious, intentional, and not about self hatred.

Like, there's a reason people have those practices, but that's not what, you know, what I'm talking about. In the [00:42:00] U. S., ten plus years ago, the federal government, in a massive overreach of, like, I didn't hire them for this, they federally mandated that hot tubs can't get hotter than 104 degrees. That's not hot enough to do anything.

So they basically neutered every possible hot tub. So I hacked mine to go up to 108 degrees and that is not comfortable, but it takes 12 minutes to get my body temperature up to 104, which is faster than a sauna will do. So getting into that, that is bicep brief, intentional conscious exposure to pain and you do it anyway.

And your body temperature goes up, 104 is where all kinds of metabolic benefits happen. And 105 is where all kinds of protein denaturing occur. Exactly. Just get right to the edge. And I don't get anywhere close to passing out from it. And then I hop in the cold punch. Yeah. So I don't maintain that body temperature.

And that effect has been really good. But the idea is I'm resetting my dopamine signaling. So I'm happier and more motivated throughout the day. And I'm spending as little time [00:43:00] as I need to. And of course, I'll get in the infrared sauna other days. So I try to mix it up. So I'll do different things. I love that.

That's great. Can I talk about what we're doing at, at fountain life? Please do. Yeah. Share, share some of that because you're doing all kinds of stuff.

**Peter:** Yeah. So there is a chapter in the book that's titled don't die from something stupid. And what I mean by that is fundamentally that most everybody, 99.

9 percent of the world, maybe 99. 99 percent of the world, have no idea what's going on inside their bodies. True. And one of the things that's important to realize is your body is incredibly good at hiding disease. Yes. You know, you don't feel a cancer until it's stage three or stage four. 70 percent of all heart attacks have no precedence, no shortness of breath, no pain, nothing on a, uh, a calcium scan.

And, and then we don't, the [00:44:00] cancers that kill you in the vast majority of the time are not the cancers tested for. So prostate and breast don't kill you, it's glioblastoma or pancreatic cancer that kills you because we don't test for those things. And I'm, you know, shouting from the top of the rooftops, Listen, you can know what's going on inside your body.

You just have to look. And, and people go, well, I don't want to know. And I'm saying, bullshit, you're going to find out. Do you want to know now? We can do something about it. Or, you know, later when it's too late. And so, I, with with Tony Robbins and Bill Capp. Bob Hruri we built this this company called Fountain Life.

We have four centers today. We're about to double it to eight centers. And we have a roadmap for 25 centers. And Fountain Life are these massive diagnostic centers and therapeutic centers. And so what we do on these centers [00:45:00] is you come in we upload you. And there are two levels. There's a core and apex.

Core and apex, the same upload, the same 150, actually 200 gigabytes of data we collect. Full body MRI, brain brain imaging, brain vasculature, body, coronary CT, low dose lung CT, DEXA scan genomics, microbiome, metabolome. Everything, you know, every blood test, food, allergies, all of this stuff. And all of that data gets fed into the AI system, and it's a multi modal AI, meaning it's taking all of these different elements together to understand and answer two questions.

Is there anything going on inside your body that you need to know about now? Hopefully there's not. If there is, let's do something about it. And then number two, what's likely to happen to you in the future? Because your destiny in some degree is written out in your genes and your lifestyle. And how do we prevent that [00:46:00] from happening?

And so, in the core version, you get the upload and a review and return of results by a functional medicine doctor of all of the results. And you get access to our AI on the app, which has all the data there, so you can query it and ask it anything about all the data. Wow. And then, in the APEX model, you get a full medical team with you through the years.

So, you get a functional medicine MD. which is your concierge longevity doctor. You get a health coach, a dietitian and, uh, a, I forgot the name of the fourth person on the team, but it's a, it's a team that's there to support you throughout the year. And that's found, that's on the diagnostic side. And what we're doing as well, which is even more exciting, is bringing in a whole set of therapeutics.

So we're searching the world always for like, what are the most advanced therapies? That are efficacious, reasonably safe, high [00:47:00] reward, and then we make those available and, and found actually participates in in, uh, IRB approved studies. So, we get access to these studies for our members. If you want to be in this advanced study on stem cells or exosomes or, Whatever it might be we make those available in the U.

S. to our members.

**Dave:** That sounds like a really, a really powerful offering. And I remember maybe 13, 14 years ago I was an early member of HLI. Yes. That was my first longevity company. It was. And the problem there was I got this big fat binder. Oh. Of genetic snips. Oh my God. And all the scans, I'm like, I'm pretty smart and I know what to do with this, but it's going to take me hundreds of hours.

And it was, it was useful, but AI didn't exist back then. I don't think it was useful. I mean,

**Peter:** so I, the, the origin story there is I was clear back then, this is yeah, a dozen years ago that longevity [00:48:00] was going to be a huge business and there's no bigger business potential on the planet, right? What wouldn't someone give?

For an extra 20, 30 healthy years of life. And so, I, I talked to Craig Venter and Bob Haruri and said, Let's create a longevity company. And I raised the first hundred million dollars for it. Craig became the CEO. And Craig, who very famously has done incredible things. He, he really raced the U. S.

government to sequence his human genome. The, the Human Genome Project took, you know, a dozen years and three billion dollars. He did it in Uh, and so that's the first thing that really got the world's attention. And then he created the first synthetic life form, which was incredible. But Craig amazing scientists, I would not I feel like he wasn't the right, we raised over 500 million, that company [00:49:00] and Craig started nine different divisions of HLI.

Which we serially shut, shut down and only one ended up, but I left HLI even though I was co founder, vice chairman of it, because it was only doing the diagnostics and it was delivering, like you said, this giant notebook of data, which was effectively I don't have to do with it. I'm pretty smart, but honestly, I, not for me.

And what we, what you really want to know is, is there anything going on I need to know about and what do I do about it?

**Dave:** Yes, that's the big thing is what do I do and what do I do first because we're not all going to do everything. And I, I feel the same way about, about exercise. You know, you're going to do Pilates, yoga, CrossFit power lifting, long distance running, you know, functional movements martial arts, tight and who the heck knows?

Bottom line is what result did you want and what's going to get you there fastest? And that, that's what Upgrade Labs is doing. In fact, we're opening [00:50:00] one in Lake Nona near Fountain Life. Oh, that's fantastic. And it's, it's super fun because, there's a

**Peter:** like Nona

**Dave:** impact forum. It's right there. It's the weekend after the impact forum.

I'm speaking at the

**Peter:** impact forum. Okay, good. I'll, I'll see you

**Dave:** there. I'll

**Peter:** be there

**Dave:** as well. I come on by and it's funny cause we're non medical. What I'm just saying, the stuff you do in the gym is dumb. Because it, like, I hope it works. It's kind of like nutritionally, like, well, I saw somewhere that, you know, avocado toast is going to keep me alive.

And you have no data, right? And maybe it will for you. I, I would humbly submit that it probably won't, uh, compared to some other foods. Uh, let's find out, right? And so I just want to do that for, for movement and metabolism without ever making it a medical thing, because there's practices you do daily and you can do it for an hour at home.

We can do it for five minutes with AI and the five minutes with AI seems better.

**Peter:** You know, time is our most scarce resource. It's the greatest, greatest gift you can give everybody. Not if you do your job,

**Dave:** but [00:51:00] we'll have unlimited time, right? Yes. Not if we do our, not if we do our longevity job. That's true.

I say you, I'm joking because we're both working on it.

There's a, a friend who runs Brian Johnson, who runs Don't Die. I've interviewed him on my main stage. I was

**Peter:** going to ask you if you wanted to go there.

**Dave:** And so. There's the don't die. And when I started in this, when you started, it was all anti aging and it drove me crazy because no one thought longevity was, was real.

And so you couldn't really talk about it. And one of the main reasons I started the biohacking movement is that I know longevity is real, but young people don't care about it. They care about control of their biology and they have different goals. And as you age, you start going, I think I want more of this life.

**Peter:** Yeah. It's like. Fucking A, it's awesome.

**Dave:** Right, like I want to be happy, so maybe you have to include some of that. So biohacking is this idea like how do you Set yourself up for multi generational where you're the multiple generations success. And the goals vary [00:52:00] over time and wealth and all that. But it feels like longevity is a thing, which is I want to live longer, but there's a difference between don't die.

Sort of like Google's don't be evil instead of be good. It feels like there's a difference there. So are you an anti aging guy? Are you a don't die guy? I'm a

**Peter:** live longer, more healthy guy. Do you know that I got Brian into the whole longevity stuff?

**Dave:** Oh, I love that. He's, he's done a great job of getting it in the media.

**Peter:** Yeah. What he called me when he sold Braintree he wanted to, he was moving out to LA and he wanted to get involved. And invest in different areas. And so he came on board as an investor in HLI early on. Oh, cool. And then he invested in my asteroid mining company, which was a amazing, amazing program and a spectacular failure.

But we can get to that another time. But Brian joined, then joined the board at HLI. I didn't know that. Oh, that's cool. His whole longevity journey started [00:53:00] There, he almost became CEO there but Craig did not want to leave, and then he went into the BCI space for a while. Kernel's amazing.

**Dave:** That's how I got to know him, was around the neuroscience that he's done.

**Peter:** Yeah, there's no question he has raised the visibility of the space. You know, I was at a event at the Buck recently and there was a questionnaire said to the entire longevity community, do you think that Brian has done more good or more harm for the longevity world?

**Dave:** What was the answer? I want to hear yours.

You know, in 2016, I wrote Superhuman. My publisher wouldn't let me call it Don't Die, but I tried. Because I kind of have that same mindset, although I'm very much about live the most amazing life, die at a time and by a method of your choosing is my real goal. Or just don't. Oh, exactly. I'm probably not going to choose to, but I reserve the right, you know.

Um, so I did the media [00:54:00] tour. I spent 2 million to, uh, on my, to reverse my age by 20 years. I'm going to live to at least 180 because if I said forever, no one would believe me. So I did this whole big media tour on Nightline and all this stuff. And then you look, that was 2016 and now we are like eight, nine years later and you know, Brian's not spending 2 million this year.

I spent 2 million over 20 years. And so I, I'm seeing like, like there's a seed that was planted 30, 35 years ago by Dirk and Sandy Shaw, the first modern longevity people. I remember them. And Dirk just passed in October of last year. Um, he rest in peace. And. So these guys were crazy in the 80s saying we're going to live forever and we're going to do these things.

And so in, in our consciousness, it's been expanding and expanding and expanding as now people think it's possible to extend human life. And 10 years ago, anyone who said that was a tinfoil flat earther. So I think Brian's just helping to expand the public awareness of this. And, [00:55:00] you know, after Brian, there'll probably be someone who gene edits their kids or God knows what, but there'll be, you know, every eight to 10 years, there's going to be another person pushing this idea that we're in charge of our biology.

And I, I kind of like the health span idea because people believe they can do that more than they believe what Brian's doing or what I'm doing. And the more people get control of their health, the more they're going to realize that longevity is a thing and they can do it. So there's, it's a wide open area right now.

I, I agree.

**Peter:** I'm not sure I, I like the hype around, his erections and, and so forth. I mean, But I guess those things get clicks,

**Dave:** you know, they do get clicks. I, I showed a video once at the biohacking conference of me getting stem cells injected in my penis, um, on stage, but the video I'm blocking.

Was that part of your bicep? Uh, this is the only fan. No, I had the blanket covering things and you see this [00:56:00] needle come down and you see my feet at the end of the camera and my toes go. You know, it was one of the things that it does get clicks and I've always done my best to just say like intimacy, including your, your partner relationships and your libido for men and women, their fundamental longevity assets that you nourish yourself with healthy intimacy and you won't find centenarians.

Who never have sex, like it, it's a part of the, the energy of life. So if we can just talk about it in a scientific and not shame based way, uh, but I didn't know that I'd want to publish my nightly erection stuff, but I've written whole chapters and books on semen retention and longevity. Cause like someone's got to talk about it, but I like it to be a little bit, you know, less I don't know.

It's going to get sensationalized cause that's what media does. But yeah, I'm with you there. Let's let's talk some more because you're, you're such a powerful futurist here. I want you to [00:57:00] go out 10 years from now. How much longer do you think people are going to live on average in 10 years than they do today?

I think there's

**Peter:** an inflection point coming. Let me come back to that and just take a moment and talk about XPRIZE for a second. So, I got a call 2006. From Aubrey de Grey, who you know, Aubrey, and is, I always, I always want to say, Aubrey, just shave your beard, cut your hair, and you'll be able to raise a lot more money for your work.

Yeah, but his beard has fractals in it. Just don't stare at it too long, you'll get hypnotized. But with Peter Thiel on the phone about talking about a longevity XPRIZE, and we kicked it back and forth and talked about it, and it was like, okay, you know. Are we going to wait 20 years to award this prize to see if we can statistically get people to live longer?

Anyway, it died. And it was six years ago that Sergei [00:58:00] Young, who you also know one of my benefactors and board members at XPRIZE. We're good friends. I'm seeing him in Dubai, uh, in the next week, actually. Yeah, please give him a hug for me. And he said, Peter, I want to do a longevity prize.

I said, Sergei, been there, done that. Can't figure it out. And he said, no, no, no, there's a way to do this. I said, okay. And, and he put up a half a million dollars of his own money to do the research. And I, what turned the tide for me was a fateful conversation with George Church. And he said, listen, you're, you're asking the wrong question.

And it was, listen, instead of talking about longevity, what you really want to talk about is age reversal because you can measure longevity is going to take you decades to measure age reversal. So you could potentially measure it in a very short time. So that was one conversation. The second conversation we had was the idea of not measuring age because there is not a biomarker [00:59:00] for age per se.

And all the, all the aging clocks are, there's a lot of noise and a lot of variability, and I'm not sure I believe any of that. I'm curious what, what you think, but we said, why don't we instead measure functional aging? Meaning, as we grow older, there's a predictable sarcopenia curve, there's a predictable cog cognitive diminishment, there's a predictable immune diminishment, and all these things make you feel and behave older.

And so the X Prize became, can we reverse your functional loss in immune, cognition and muscle by at least 10 years, with a goal of 20 years. And that's a measurable thing. In fact, it's, it, the FDA will accept that as measurable endpoints, which was really important. And so with that in hand, I went out and raised that 141 million.

[01:00:00] Uh, Chip Wilson, the founder of Lululemon, he's got a a FSHD, which is a muscular dystrophy. And I said, Chip, listen, I would love for you to, you know, fund this 100 million prize. And we went back and forth. He said, nah, I won't fund a hundred million dollars, but I'll put forward 35 million of it.

Cause I want others on this, on this joy ride with me. And he said Peter, how much is Elon's X prize for carbon removal? Because I had sold Elon on a prize years earlier for a hundred million dollars. I said, a hundred

**Dave:** million dollars, Chip. Remember I wrote, I wrote the first 50, 000 check. What I stood up and remember, like argued.

Yes, that's right. You were in our visioneering.

**Peter:** Yes, you're setting up that, that prize for, for carbon sequestration and Elon funded it in, uh, in 2021. It's about to be awarded now in 2025. It's going to be exciting. Long story short Chip goes, how much is Elon's prize? And I said, it's a hundred million dollars, Chip.

He goes, can we make ours bigger? [01:01:00] Can we make ours a hundred and one million? And I said, sure, Chip, would you put the extra million in? He goes, okay. So he ended up donating 36 million towards that. And we now have about 600 teams around the world competing for this, right? And so this is part of that longevity mindset.

This is part of the What is, what are we likely to see in the next 10 years? And so this prize will end in 2030. If you talk to Ray Kurzweil, his prediction for longevity escape velocity is by the end of the year 2030. So in 10 years time, right? We're recording this in 2025. So by 2035, what will we see?

Potentially a lot, you know, potentially decades added to your health span. Um, and I'm, I'm using the term healthspan, not lifespan. It's like how old you have the [01:02:00] vitality, the aesthetics, the mobility, the cognition to really enjoy life. Cause that's really what matters.

**Dave:** Yes.

**Peter:** Yeah. So I think by, you know, within the next 10 years, we could see decades added onto the healthspan, which by the way, during those additional decades of health that you get, science is not standing still, right?

It's continuing to do breakthroughs. So why can the bowhead whale live for 200 years and the Greenland shark live for four or five hundred years? I want to know and I want to actually Use this as a therapeutic for our for myself my family my friends My abundance members, my fountain life members.

**Dave:** Wow.

I'm, I'm with you on that. The most important thing is get your energy back, get your brain back, get your body so it's not hurting and then get it looking the way you want and feeling what are you doing mostly on a supplement level for energy? I have been obsessed with mitochondria since, uh, the [01:03:00] Bulletproof diet which was like.

2011, I think. Right. And I take all of the mitochondrial stimulators. Most of the companies come on the podcast when the first research comes out. So intermittent fasting was a big part of that book. It was the first big intermittent fasting book helped to start that, that trend. So I do intermittent fasting.

How much, what's your,

**Peter:** what's your fasting period?

**Dave:** I usually do 18 hours and I don't do it every day either. I, I had to write a second book on because so many people like Jack went extreme. Yeah, you know, Jack from Twitter, man, he, he was like one meal a day, four nights a week and a 72 hour fast on weekends.

And it is a stressor like exercise. I don't think CrossFit every day is good for you because you can't recover. And I don't think fasting too much is good for you, especially with women. So I mix it up based on how tired am I. Uh, you know, how much, how many times those did I cross? Did I lift something heavy?

But 18 hours is a good number. And occasionally I like to do a longer [01:04:00] fast which could be 48 or 72 hours. I think those are fundamental things. Other things that I do sometimes being ketosis, sometimes being out of ketosis, unending ketosis is bad. And never being in ketosis is not good either.

Um, I protect them with exogenous ketones, like either MCT or ketone diol, especially when I fly. Because you get a lot of mitochondrial harm when you fly. What do you use for NAD supplementation? I am a fan of QOLIA NAD And one of the issues that's come out over time with using NAD is that the first 60 90 days you're going to feel good on NAD.

But your CD38 inflammatory cells will consume NAD 20 plus times more than your healthy cells. So it's like two, two months of goodness and then subtle inflammation. So you have to block CD38 EGCG and a few other compounds like that. Is that the green, green tea extract? Yes. [01:05:00] And that'll usually keep that down.

There's also an NAMT issue as well. So there's a couple nuances to doing it. I used to do the IVs. I don't do them really much anymore. Occasionally I'll do a subcutaneous stick, but generally I'd take supplements. I don't take them all the time. And I also like niacinamide, which is the precursor to NR and NMN.

What do you do for NAD? It's mostly NMN.

**Peter:** I am looking at a new protocol there. And, NR is good, but I'm concerned about uptake. I think uptake with NMN is stronger. Yeah, I think you're right. Do Shi? From which company? What is Jin's, uh, company named? It's basically an NAD measurement company and an NAD supplementation company.

He's got a new set of protocols. It's Jinfinity. Yes, of

**Dave:** course. Jinfinity's been on the show. Yeah. I was thinking, I just couldn't remember if that was [01:06:00] the same Jin. Yeah, they have some really good protocols that they're

**Peter:** coming up with. So, I haven't measured it enough. I'm going to start, you know, a A measurement protocol and then a supplementation protocol to see, you know, what really works for me.

**Dave:** It's a great plan, Peter. And the fun thing about being a biohacker or longevity scientist is that you can always say, well, this is something I want to, I want to play with for a while and get your NAD levels where you want them. Uh, my big thing is klotho. I haven't bought the $10,000 electrical stem suit.

'cause I'm pretty sure the gene therapy for mini circles is gonna get me there for clone. Klotho is also cognitively enhancing. So if my queue goes up and my my age markers go down, I'm like, great. I got some benefit. Look what I got under my, my desk here.

**Peter:** It's uh oh. You've got one, A body stem suit. Have you tried it?

I haven't yet. I wanna measure my cloth levels first. You know, it's like, it's like, I'm either going to, I'm not doing shit on, on, on faith. [01:07:00] It's like, I need to measure the numbers first. And I hope you'll do that with, with cloth though in the mini circle

**Dave:** routine that you're

**Peter:** doing.

**Dave:** Oh, definitely. I just pulled my blood maybe four days ago for the pretest for that.

And it, I've been doing a similar electrical STEM protocol for 15 years. And in fact, when I was at, The first at the 10th anniversary of the Ansari XPRIZE, where I first hung out with you, I brought my electrical stem machine and I was shocking Bob Hariri and you know, and it's the same waveform as the body stem uses.

So I could have already raised my clotho without knowing it using electrical stem. But who knows, right? I think there's something to be said for that. Yeah. It's

**Peter:** if I were to ask you, how do you feel energetically, cognitively? Emotionally today versus 10, 20 years

**Dave:** ago. Peter, I am so profoundly better off today.[01:08:00]

I am 4. 8 percent body fat. I'm never hungry. My brain runs circles around people half my age. I am just about inexhaustible. I know that I can hit the wall. I can just keep moving the wall further and further out. And at a certain point, I guess I'm going to crash. But The amount of pain in my body has gone down very substantially from any time in my life, mostly through depleting oxalate levels in the body.

 and, uh, the mental acuity. And on top of that, I've spent six months of my life over the last ten years at 40 Years of Zen. Each five days is 20 plus years of meditation. So I spend a lot of time measuring my brain and learning how to change my mental and emotional states. I love that. And to create that sense of peace when I want it.

And so, I've also been through a lot of crap. With Bulletproof and some other situations and my ability to remain, that's what I'm looking for, resilient.

**Peter:** Yes, resilience is a critical element [01:09:00] here, right? Because the world is going to throw shit at you and you know, you lose by giving up. You know, I, I agree.

I'm, I feel like I'm, I say that in the opening of my book, I'm 63. How old are you now, Dave?

**Dave:** I'm 52, although I'm triggered because I identify as being 35. Peter, I think you judged me. I'm kidding. I'm sorry about that. You're, you're,

**Peter:** you're clock time. But I am arguably at my peak across every single element, creativity, functionality, emotional you know, strength.

And I do, I, I have a team of 20 something year olds and I exhaust them.

**Dave:** Isn't it ridiculous? Like, who would have ever thought this was possible? Cause I,

**Peter:** I'll tell you one of the secrets of longevity that was an interesting discovery was I had kids at 50. And so my, my twin boys now are 13. And I love having It's like, you know, they keep me in the game at a [01:10:00] level of that is, is super valuable again, it's part of that mental game of loving life.

And, you know, one of the things that is important is, you know, in Dan Sullivan says this, he says, yeah, your future needs to be bigger than your past. Yes. Right. That mindset game. And for me, I'm like, because I'm living in the exponential world, right? I'm doing. So much in all of these exponential tech fields there's this infinitely expanding opportunity space that is like, holy shit, this is amazing.

It's like everything I dreamed about as a kid. Star Trek is coming online. It's like, holy, holy cow. That's amazing. So, it's this level of wonder you said earlier, the sort of the boyhood wonder now.

**Dave:** It's funny, Dan, Dan Sullivan's been on the show as well, and he has that same, it is, I call it childlike and some people react that no, it's like the most beautiful, like hopeful, [01:11:00] curious, happy, like, I can't wait to see kind of energy, the people I know, even in their 80s, and having run a longevity nonprofit group when I was in my 20s, I learned a lot of my stuff from people in their 80s.

The ones who have the happiest lives and the most results and longevity all have that mindset. Like, that's the hardest one to teach, but you embody it just beautifully.

**Peter:** Thank you, pal.

**Dave:** As, as do you, as do you. Thank you. I know we're coming up on the end of the time we have, but I want to ask you a kind of a philosophical question here.

Knowing what you know about longevity and just about everything, if you could go back to your 20 year old self, give yourself a couple pieces of advice, what would you say?

**Peter:** It's the same advice I give independent of the age that I'm talking to somebody about. It's find your purpose in life. The single most important thing is find your purpose, your passion.

Not [01:12:00] less your passion more your purpose. What I call it is your massive transformative purpose. It is The thing that excites you gets you out of bed in the morning keeps you going at night It's what you're on this planet for you know, I just created and I'll share it's the first podcast I'm sharing this with you know, I teach my all my abundance 360 members about creating an MTP.

You've heard about this many times and, um, I've just created a large language model site where in 10 minutes, seven, if you go quickly it will walk you through a series of specific questions and then it will formulate a number of MTPs for you to. And you can fine tune them, visualize them. And then, you know, I, I talk about my MTP that, you know, my earliest MTP, that was my first 20, 30 years was to [01:13:00] inspire and guide entrepreneurs to create a commercial space flight revolution, right?

That led to the XPRIZE, led to International Space University. My MTP shifted over the last 20 years to be to inspire and guide entrepreneurs to create a hopeful, compelling, and abundant future for humanity. Less focused on space, but more on what are the components that can uplift humanity. And my MTP right now is really focused on inspiring, guiding those entrepreneurs to extend a healthy human lifespan and lead us towards longevity escape velocity.

So the, these MTPs, these massive transformative purposes, my job is to communicate those to the world. And then the world sends me incredible opportunities. In line with that, so my advice to my 20 year old self, my 10 year old self, my 50 year old self is, is find your MTP it, you know, these are usually 10 year long purpose driven commitments of [01:14:00] time and your moon shots, which is the name of my podcast lives on top of that MTP but find it and so that it's your ultimate, Energy resource.

You're fueled by that emotional energy to do something that's meaningful for a group that you love and care about. I

**Dave:** love it. And I also love that you talk about it changing. My, my, I wouldn't have called it MTP back then, but back in the early days of, of the internet, you know, the first data center company, my, my idea was we have to have horizontal scaling systems or the world is stuck.

You have to be able to plug another computer in, plug another computer in. And I worked really hard on that stuff. And it was, it was very important for all of the cloud, all the things that we're doing today. And if I was still stuck on that, Oh my God. I would be so unhappy. So like you said, about every eight or 10 years, you're like, I'm done.

I got to find something new. And I think that's part of the longevity. Yes.

**Peter:** And that growth mindset keeps you [01:15:00] going. By the way, I should mention if people want to discover their MTP I really recommended go to my purpose finder. ai and my purpose finder. ai. And it's a, it's a free video information driven.

It's fun. Actually, people love it. And at the end, you'll come up with a clear you know, massively transformative purpose and the visualization of it. And if you allow yourself to communicate it with the world. You get such extraordinary benefits from letting the world know who you are at your heart and soul and what you're doing on the

**Dave:** planet.

I love that, Peter. And inspiring people to think bigger is one of the things that is your, your biggest gift and you do it all the time. And it's just been an honor to be a part of it for a decade with Abundance. Thanks for writing the guidebook and for FountainHealth and all the, all the cool stuff you're constantly [01:16:00] working on.

Some that people know about, some that people don't. And you made me really happy when you said that Carbon Capture XPRIZE is going to be awarded next year. I, I fought like hell. It was number four out of a list of three things to get funded. And

**Peter:** well, I will make sure it's going to be in May sometime.

I'll make sure that you are on at the event with us and recognized along with our rest of our key people.

**Dave:** I was a tiny drop. It was at the beginning, but I, I, I remember the goose, like the hair, my goose, uh, goosebumps and the hair on the back of my neck when. You know, a couple other guys came in and then one of the bigger guys was, I got a quarter million dollars.

Let's fund this prize. And you were up there going, okay, we've got it funded. We're going to do an extra prize. And so, man, I'm, I'm just, I'm so

**Peter:** excited. It was interesting because the way I got funded to, we raised 130 million from Elon was interesting. In, it was January 7th, I think of 2001. He had just become the wealthiest person on the planet, right?

And, uh, he [01:17:00] was getting a lot of flack on Twitter back then for not being philanthropic enough. And so I texted him, I said, Hey, Elon, let, you know, you had funded a 15 million global learning prize five years earlier that was successful. I said, why don't you find another X prize? He goes, what do you even mind?

I said, a carbon capture, carbon sequestration prize. He said, how much? I said, a hundred million dollars. And he wrote back four letters. Sure.

**Dave:** That sounds incredibly like Elon. That's that's a baller answer. But Peter, as we're winding down, the most like alpha male geek experience I've ever had in my life was you standing on stage at Abundance 360.

When Elon calls you on a video call from his airplane over Twitter's video thing, I mean X, using Starlink. So here's a guy who wrote the software, or at least owns the software that I think they did roll out on his jet with his satellite [01:18:00] network. I'm like, that is peak geek beyond anything I've ever seen.

And you were on the end of that phone call. That

**Peter:** was so cool. What could possibly go wrong? Half hour conversation with Elon talking about AI and Optimus and Neuralink. And it's like, it was a great connection. And, and he was, he was really on and really focused. I still have an argument with him about longevity though.

He still says he eats doughnuts every morning. So,

**Dave:** so does Aubrey de Grey, you know, the pizza and beer thing. And it's one thing to say technology is going to save me. It's another thing to say I'm going to hedge my bets. I might as well feel good right now. And let technology save you. And I'm in that camp, but I respect people who are just making the bet.

You know, you gotta live your life. I just don't feel good on donuts, so I won't do it.

**Peter:** Well, brother, a pleasure to see you. I'll just mention longevityguidebook. com is where folks can get the book at at my cost. It's half of what you'll get it on Amazon. But if you buy it on Amazon, I'm donating 100 percent of the profits to the XPRIZE [01:19:00] Foundation, to our HealthSpan Prize.

And, uh, for me, you know, I'm on a mission to help a million people understand the potential they have for an extraordinary health span to get those extra decades of life as you are. And, and, and thank you for all of your incredible work with, you know, Superhuman and Smarter Not Harder and Upgrade Labs and 40 Years of Zen and all the things that I've had the pleasure to benefit from.

So I'm grateful

**Dave:** for you, buddy. Wow. It's always so fun. I can't wait to see you at Abundance. And I have my early release version of the Longevity Guidebook. So I'm working my way through it. So much appreciation. Can't wait to see you at Abundance. See you next time on the Human Upgrade Podcast.