

The Human Upgrade: Episode 1129

[00:00:00] **Dave:** You are listening to The Human Upgrade with Dave Asprey. What would happen if you crossed a stem cell scientist with an herbalist and had them write books and create stuff? Well, what you get is something pretty weird, the ability to stimulate stem cells without having to get poked with needles or have maybe your bone marrow taken out twice, like I've had.

[00:00:28] Now, there are some people who will recreationally remove bone marrow, and I may or may not be one of those, but there aren't very many of us. And so if you wanted the benefits of whole body stem cells cost effectively, I think there's a clear scientific case that you could do it this way. So I thought, why don't I bring in the inventor himself? Christian Drapeau. Christian, welcome.

[00:00:51] **Christian:** Thank you, Dave. Nice meeting you.

[00:00:53] **Dave:** You wrote a book called Plant-Based Stem Cell Enhancers, which did not make the New York Times Bestseller list. It's one of those specialized books with precious knowledge in it that's targeted to a relatively few people, but is bringing some new knowledge to the world basically. So I'm pretty excited about that. And the first question for you, plant-based stem cells versus plant-based stem cell enhancers, what's the difference?

[00:01:23] **Christian:** Every living organism in nature has a place in its structure where there's a layer of stem cells. They are the cells that will migrate in the tissue of that plant, and that will become essentially anything else in the plant. So you have these plant stem cells. They are stem cells for plants. They have the DNA of stem cells. If you take them by mouth, you will kill all of these stem cells. You will kill everything.

[00:01:48] **Dave:** So plant-based stem cells are bullshit.

[00:01:51] **Christian:** They contains a level of, let's say, generally speaking, cytokines growth factors that when they're applied topically, they could have an effect on human tissues. I'm not saying they're bullshit.

[00:02:03] **Dave:** So growth factors are real. That we know about. But a lot of companies are saying, oh, we have plant-based stem cells. But the plant-based stem cells don't act like stem cells in your body. And I consider that to be marketing BS. But do plants stimulate your own stem cells? That's different.

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[00:02:19] **Christian:** Correct. So that's what we're talking about. So we're talking about plant-based stem cell enhancers or mobilizers. You take them and they trigger the release of your own stem cells.

[00:02:32] **Dave:** Can you eat stem cells?

[00:02:33] **Christian:** You can, but it won't do anything because you kill them.

[00:02:36] **Dave:** Then why does STEMREGEN work?

[00:02:38] **Christian:** STEMREGEN is plants, plant extracts that will trigger the release of your own stem cells. So just like you have kinesia supporting your immune system, these are plants that supports your repair system, which is your stem cells.

[00:02:49] **Dave:** Why does it matter that they're plant-based?

[00:02:52] **Christian:** It doesn't matter that they're plant-based. It's just that anything that you take orally as stem cells, your digestive system will kill them.

[00:02:59] **Dave:** So you eat your own stem cells, they don't work either.

[00:03:02] **Christian:** They don't work.

[00:03:03] **Dave:** Exactly. So eating stem cells, bad idea. So I've heard the Kardashians are drinking their placenta for stem cells. Is that real?

[00:03:12] **Christian:** No, it's not. Eating stem cells will kill the stem cells, so it's not a thing. However, I must say that there is a tradition in Africa where you take the placenta and you just smear your face with it and it gives you a facelift. And that is true because you apply basically exosomes.

[00:03:29] **Dave:** You get exosomes from it. And I actually fully support eating your placenta because getting minerals from the placenta back in mom is something that will stop postpartum depression. It's oftentimes a lack of copper and zinc that triggers it, and it's all there in the placenta and we waste it.

[00:03:47] So I'm not tough enough to recommend cooking it up with liver and onions or whatever they used to do, but you can get it made into capsules, and that's really smart. Eating

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things that don't get digested and act as signaling molecules in the body, this is what's got me excited. In the very latest books, Smarter Not Harder. I talk about the basic tenets of biohacking.

[00:04:08] It's get a signal into the body that causes the body to do what you want. And stem cell regulators, which are coming from plants or from animals or from chemicals even, it doesn't really matter as long as you're getting the right signal to the body that says, make more stem cells. And now these are my stem cells. They're bioidentical. They're not from eight or 10 random women's umbilical cords, which seems expensive and a little risky. What are the risks of using STEMREGEN versus using umbilical stem cells?

[00:04:39] **Christian:** Zero risk. That's one of the beauty of what we have with STEMREGEN. It was not designed that way, but how did we identify the plants having an effect on stem cells? We started with the thought that a plant that supports stem cells in the body, that means stem cells were going to the pancreas of the diabetic, the heart of the heart patient, the lung of the person.

[00:04:59] So that means they will bring a broad variety of benefits. So we looked at plants historically known to be associated with the broad variety of benefits, and we studied those plants, and they just happen to be plants that have been used for centuries, sometimes thousands of years. So there's absolutely no risk at all. We've done it as humans for a long time. We just didn't realize that these plants had an effect on stem cells. That part is the new part.

[00:05:24] **Dave:** To get more details and save 20%, go to stemregen.co/dave. This is one of the things that makes me happy about biohacking. So I started this journey not knowing anything about eastern practices, even herbal stuff. I was a skeptic actually. And when all of the Western approaches failed, I'm still 300 pounds. My brain is turned off. I have actually brain damage from toxic mold, and I'm just trashed. That's when I went to the jungle. That's when I went to the Himalayas, and I learned all these esoteric Eastern practices.

[00:05:59] And what I found over time is that all of the stuff that I was taught was BS actually worked, but no one in the west would believe it. So part of the biohacking movement is, hey guys, let's get our own data from our sleep trackers, from our own labs, from whatever, and suddenly, over the last 10 or so years of making biohacking a thing, we now have millions of people saying, that old stuff worked. What my great grandmother said was true. And what you

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did is the same thing. You're a legit stem cell scientist. Your first book was 2013, 11 years ago on stem cells. Very early pioneer.

[00:06:32] **Christian:** Mm-hmm.

[00:06:33] **Dave:** You're saying, well, let's compare your herbalist knowledge with the knowledge that you have as a stem cell scientist. You cross them over in the lab. What are a couple ingredients in STEMREGEN that you found worked?

[00:06:45] **Christian:** Let me answer this by going to where it all started because the starting point was not to say I'm a herbalist, so let me look at plants and what they could do in stem cells. It was working with a plant, which was blue-green algae from Klamath lake at the time in the late 1990s.

[00:07:02] And we cannot explain why people consuming this plant have very significant benefits, touching heart function, liver function, lung function, pancreatic function, brain. So how can one plant touch so many things in the body? And at some point, early 2001, stem cells are only believed to be precursors to blood cells, and reports start to show up in the literature that stem cells can become brain, liver, heart.

[00:07:29] So the thought was, what if stem cells are the repair system of the body? Nobody has ever looked at it that way. And what if that plant works by putting more stem cells in circulation? That was the starting point. And from there, then I started to do exactly what you just described. Let's look at all these plants known historically to bring many benefits. And guess what? Maybe they have an effect on stem cells. It was just not a thing more than 20 years ago. This is really new in the scientific literature.

[00:07:57] **Dave:** Is there a blue-green algae in STEMREGEN?

[00:08:00] **Christian:** Yeah. Blue-green algae, it was the first one that we document. It's not the strongest, but it's the first one.

[00:08:05] **Dave:** So blue-green algae has pissed me off, to be perfectly honest. So I was a raw vegan, and as a raw vegan, I'm pretty sure I had a blue-green algae enema at least once-- not really. But you do all sorts of weird stuff when you're a vegan, especially when you start being raw, because the original vegan doesn't work must because it's cooked.

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[00:08:26] So this was a thing. But then I learned about toxic blue-green algae and how it makes toxins almost identical to mycotoxins, low molecular weight toxins that get into the fat soluble membranes in the body. I had to clean all that crap out from toxic mold, and Lyme disease does it. Brown recluse spiders do it.

[00:08:47] Barracuda eaten in the off season will do it. There's all these ways you get these toxins in, and a third of us don't spit them out, so we just get brain fog and feel like crap until we die, unless we do something. So I was like, how do I know that I'm getting blue-green algae that's clean that doesn't have the bad blue-green?

[00:09:04] **Christian:** I mean, We can go deep in this if you want, because I was--

[00:09:06] **Dave:** You're the guy who asked. Yeah.

[00:09:07] **Christian:** In the middle of this. And when the knowledge of toxins coming from blue-green algae, all exploded in the late 1980s, 1990s. And when all of this exploded in the marketplace, I was the link with the FDA in Washington to evaluate a lot of these issues. So I worked with this very deeply. And to summarize it, the blue-green algae AFA from Klamath Lake itself does not make toxins. It does not.

[00:09:40] **Dave:** It does not, absolutely.

[00:09:40] **Christian:** It does not. There are many strains of that species other places in the world that make toxin. And in the scientific literature, toxicologists are interested into toxins. So it makes those strains appear to be like-- make the picture appear much bigger. In reality, they are thousands more strains of these blue-green algae that are not toxic.

[00:10:02] **Dave:** It makes sense even with toxic mold and black mold, well, koji, which makes sake, which is really-- I don't drink, but if I was going to drink it would be like a \$500 bottle of sake with amazing sushi. And it's made by black mold, just non-toxic black mold.

[00:10:19] **Christian:** Correct.

[00:10:19] **Dave:** So I like your point there. And within STEMREGEN, because you've worked on this for many, many years-- and by the way, guys, Christian and I, we sit down and go really deep over dinner on all this crazy deep biohacking stuff.

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[00:10:33] It's one of my favorite people to talk to because he is very broadly knowledgeable on both sides of the equation, The plant stuff, the ability to talk about this relatively unknown aspect of blue-green algae. So I do take STEMREGEN. It does not have that toxins because I can feel those toxins build up.

[00:10:50] And you would be the guy to test it and know, but I'm skeptical when someone who really is well-meaning, like, I have these vegan blue-green Smurf cookies, and there's blue-green, and they don't know anything about where their algae comes from. I'm just going to skip that one, because I've had blue-green drinks that knocked me on my ass and I know what's going on in there. So you've got clean blue-green algae, and you've got a bunch of other things in the right combinations for a STEMREGEN.

[00:11:14] **Christian:** Correct.

[00:11:15] **Dave:** Okay.

[00:11:15] **Christian:** And the right combination is really-- we've studied probably, I would say overall maybe 20 plants for their effect on stem cells because it's a really expansive assay. It's a human assay. So we're very selective as to what we've tested over the years and trying to, at times, infer and at times actually test the mechanism of action. The idea with STEMREGEN is to bring the plants that will release stem cells using different mechanism of action. So you get a synergy with all these ingredients. So that's what we have.

[00:11:47] **Dave:** That's really cool because I've had stem cells injected twice, even co-invented a procedure for that in every joint in my body. All been down my spine, toes, knees, ankles, reproductive system. STEMREGEN doesn't do that though. I've also had probably almost a billion, if not more, of stem cells of my own that are grown in a lab put in intravenously. Compare and contrast these a 100,000-dollar procedures with a bottle of STEMREGEN. What are the differences?

[00:12:23] **Christian:** I don't want to make a comparison here that makes STEMREGEN look like a treatment. That's a treatment claim. Let's put that aside.

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[00:12:31] **Dave:** I wasn't treating anything. I was just doing longevity, but still, there is a difference, but most people just get stem cells intravenously. They're not getting injections and knees and stuff.

[00:12:41] **Christian:** So if we talk numbers, the procedure that you describe is unique, and that's where there's a difference, meaning stem cells don't have an easy access to joints. They do, but not as-- so an injection, when you talk about joints, that's where it's really valuable. When we talk about systemically, you talk about you received about a billion stem cells.

[00:13:01] **Dave:** Over the course of many treatments. Yeah, I've been a stem cell, call it tourist since 2014. I've had many, many procedures from different practitioners, mostly just because I write about it. I got to try it.

[00:13:13] **Christian:** So you take two capsules of STEMREGEN and you will release-- and the number that I'm giving you here, we can, if you want, talk about how we came up to that number. It's a real number. It's not a rounded number, but coming from all the studies we've done, you will release, I would say an average, most likely, a minimum of about 10 million additional stem cells with two capsules. Do this every day for three months. You've released a billion stem cells for the cost of three bottles. So you see what I mean.

[00:13:42] **Dave:** Okay. So how many stem cells would you get with a typical umbilical stem cell treatment?

[00:13:47] **Christian:** I If you pay, let's say 20 grand, you will have about 100 billion. Oh, sorry, 100 million.

[00:13:52] **Dave:** 100 million.

[00:13:52] **Christian:** 100 to 200 million.

[00:13:54] **Dave:** So that's less than one bottle of STEMREGEN.

[00:13:57] **Christian:** Right. But the thing you understand is that of those stem cells injected, you have about an estimated 10 to 15% survival's. So that was really 10 million effective stem cells. You have released 10 million with two capsules. They're your own.

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[00:14:13] **Dave:** This is something that's really important for listeners to understand. And guys, if you're going to do intravenous cells, I'm a huge fan of doing your own cells for a variety of reasons, including survivability.

[00:14:26] You get a vial that has a bunch of stem cells from some random people that has been tested for "everything", but the asterisk on everything is hard to know what it really is and what they missed. You also have to deal with the fact that from when they were taken, many, many of them died. Just like if you take probiotics, there's 100 billion colony pharma units, but none of them lived because the bottle was open.

[00:14:49] So we have that issue in the stem cell world. I'm not saying umbilical cells don't work. I don't believe using them is a good idea when you could either get your own stem cells to inject or instead of doing intravenous, or even on top of doing your own intravenous, you could do something like STEMREGEN. And now you just do it for three months. Just what, once a year? Once every six months?

[00:15:12] **Christian:** Over the past 20 years, I grew up with the evolution of that science, and we published in 2001 the first article in a journal called Medical Hypotheses suggesting this idea that it looks like stem cells are the repair system of the body. As this information evolved, something else that became clear is that while we study stem cells for injuries repair, like when you have a problem, what has emerged from this is that you study stem cells for a problem.

[00:15:41] It's a heart attack, and you look at stem cells migrating in the heart. But after the study is completed, sometimes there's mice that are left in that study. And when they look at these mice, let's say three, four months later, you have stem cells that have migrated everywhere in the body. So to make the story short here, they're the repair, but they're also the maintenance system.

[00:16:00] **Dave:** Mm.

[00:16:01] **Christian:** Everything. Health is a cycle. At your age, you don't have, let's say a 50-year-old liver, 50-year-old pancreas, 50-year-old lung. Your liver renews every two, three years, pancreas, four, six years. You have half a new heart every 25 years. Everything is in turnover. The problem is that the red marrow you're born with converts into yellow marrow very early in our lives. By age 30, we've lost 90% of our red marrow. So in your 30s, you may remember, you have discovered that you're not Superman anymore.

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[00:16:31] You used to be. We were all Superman, Wonder Woman, and now I realize I'm not healing, repairing as well as I used. It's that number stem cells. Now there's not enough to repair and to offset cellular loss. And that's when you start to slowly realize you're aging. So with this understanding, I wanted to put more stem cells in my circulation every day to offset the everyday deficit that I have.

[00:16:56] So for me, it's an everyday thing. But with STEMREGEN, it is so effective compared to other products that I've had in the past that now I'm starting to realize, yeah, maybe you could do this for, let's say two months and then be off two months. If you release 600 million stem cells in two months, it should cover for the past few months.

[00:17:14] **Dave:** And you just do it all the time, though.

[00:17:16] **Christian:** I do it all the time.

[00:17:17] **Dave:** I've been on it all the time too, and I know everyone listening has a budget. Even we have a lot of people who can pretty much afford anything they want, probably more than I can. And aside from that small number of people, everyone's going, all right, is it worth it? And I look at going out there and spending, even if someone's doing bargain basement, \$500 a month stem cell treatments or something, you still got to go, and you still got to get injected and they're from random people.

[00:17:45] And that would be the cheapest thing I could ever imagine. I don't know anyone doing that. And if they did, I'd look at it a little bit funny. So what would the next option be? It's to go out and spend \$10,000. And if you have a knee that's blown apart, you probably should spin that because it's cheaper than replacing the knee.

[00:18:01] And you also should take STEMREGEN. But if you're just looking for longevity, even starting in your 30s. One of the reasons I made biohacking, I'm an expert in the longevity field before it was cool the way it is now from running a nonprofit. I started doing this in my 20s because I had the diseases of aging, arthritis, and brain fog, and high blood pressure, all these high blood coagulation, and all these other problems.

[00:18:29] And so I learned from people in their 80s who were reversing it, and I thought, man, if people in their 20s and early 30s would do 5% of what I had to do, they would not age. And

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then they're still, like, when I was 25, did I care about aging? No, I cared about getting laid. I was 25.

[00:18:45] That's what you do when you were 25. That's okay. That's how I was supposed to be. And maybe also having a job and career and a nice car and all that kind of stuff. But at that age, you're not going to age. But since I already felt the pain of, wow, it hurts when I walk and all this stuff, I maybe was more keenly aware.

[00:19:04] What if it gave you more power now and then you didn't age? Because that's the secret. Preventative maintenance is free compared to reversing aging, which is what I've spent a couple million bucks doing. When is the right time? Is it 30? Is it 25? Is it 35? When do you start STEMREGEN?

[00:19:24] **Christian:** Let's speak theoretically because it's a recent science. It's a recent product.

[00:19:30] **Dave:** It's okay to say it should be this way, but we don't have a clinical study.

[00:19:33] **Christian:** We don't have background. We don't have 50 years behind it. So now that we know that there's a point in your 30 where you don't have enough stem cells to offset cellular loss, that means now you start to be to build a deficit in the equation of losing cells in your tissues and replacing them.

[00:19:50] **Dave:** Mm-hmm.

[00:19:51] **Christian:** That means the disease that you'll developed in 20, 30 years from now started today. And so when I published this whole view of the role of stem cells in aging in 2013, the data was not there. It was pointing in that direction. In that article, I said, there's one way to prove if this is true. Let's go and count the number of stem cells in the bloodstream of people who have developed any so-called age-related disease. And let's compare that to healthy people.

[00:20:17] Today, many of these studies have been done. There's probably about 50 of those. You count the number of stem cells in people with diabetes, heart disease, liver failure, kidney failure, COPD, erectile arteriosclerosis, Parkinson, lupus, arthritis, and the list keeps growing, they all have across the board, 50% or less than the number of stem cells that you find in healthy people. So conceptually what that means is that the person who is healthy at seven years old, he just

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happened to have a genetics that make him have naturally more stem cells in circulation than others.

[00:20:54] Everything is dictated by how many stem cells you have every day for the rest of your life to repair. Once we understand this, my view is like, start to put more stem cells every day, and then you maintain the function of organs. We don't have enough time right now to look at it, but in my book, if there's one strategy for longevity, you can do a lot of things to biohack your body. But from a longevity standpoint, start by the starting point. The building block of health in the body support the body's innate ability to maintain its own health is your stem cells.

[00:21:30] **Dave:** Okay. In my longevity book, Superhuman, and this is a book, by the way, it says, here's how you can add several decades to your life. It's a longevity book. There are some recent books out by people who claim they're in the longevity space and their book says, we can't extend human lifespan. Your best bet is to just exercise a lot, take statins, and get extra vaccines. Literally one of the top books in the New York Times right now, and I'm just laughing. I'm like, this is a Luddite book, and it's actually embarrassing.

[00:21:58] **Christian:** Yeah. In 40 years we'll say, oops, it didn't work.

[00:22:02] **Dave:** It's like, maybe someday we'll extend human life by 10 years. And I'm like, this alone has that, and this is only one of seven pillars of aging that I wrote about. Stem cell exhaustion is one of the seven things. If you only fix your stem cells and your mitochondria are trash, it's probably not going to work because mitochondria power cells--

[00:22:20] **Christian:** It's not the only thing.

[00:22:21] **Dave:** You do them together. But if your mitochondria work and you have no stem cells, you're still going to age.

[00:22:26] **Christian:** Exactly.

[00:22:27] **Dave:** So this looks like something that compared to interventional stuff is far more cost effective and you actually get more cells this way anyway. And there are some treatment's coming down the line. I'm working with a company on iPSC edited stem cells that have certain longevity properties. I'll be getting those. And you inject those. They're not umbilical cells from random people. They're tested, characterized, and then edited to do specific things.

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[00:22:55] **Christian:** Mm-hmm.

[00:22:56] **Dave:** So what I do that and STEMREGEN to keep my own stem cell things topped up? Heck yes, I would.

[00:23:01] **Christian:** Yeah. Because the moment that you inject the stem cells or you introduce a new stem cells in your body, if you're talking about iPSC, they're your own that have been tweaked, the moment you put them back in your bloodstream, they go to the bone marrow. That's their natural function. In today's world, for example, you have cancer treatment.

[00:23:18] **Dave:** Mm-hmm.

[00:23:19] **Christian:** You get radiation, chemotherapy, whatever. Then we give you back your stem cells. You don't need to inject them in the bone marrow. Just put them in the bloodstream. They go to the bone marrow. They reconstitute the bone marrow. The moment you inject one of these stem cells, it will go into your bone marrow. Now you use STEMREGEN and you support it to get back into circulation and go and work in the body.

[00:23:40] **Dave:** Wow. This is cool stuff. And I'll say, if you look at some weird herb that we've been using for 5,000 years, they couldn't spell stem cell. They didn't know what stem cells were. And it reminds me of one of my favorite recollections. And this is from a book on shamanism, I think an encyclopedia of it, where they introduced scientists, western scientists, talking about-- oh, I think this was Candace Pert's book. She's a woman who discovered the opiate receptor.

[00:24:14] And so they put shamans and molecular biologists together, and the biologists are explaining these signaling molecules and how you can have a receptor for opiates. And the shamans just start laughing and laughing and they go, you think those things exist? And yet they both agreed on the same practices, but one picture was very molecular and one picture was very esoteric. And they both were like, cannot be, but the results were the same. And so this sounds like one of those examples.

[00:24:45] **Christian:** What you just described is my approach. As a scientist, what I produce is very modern western science, but my inspiration and my thought process is to look at what worked in history because that is real.

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[00:25:02] A double-blind placebo-controlled study is telling you what has happened in those 50 individuals, and they're telling you that this will be true for everybody. What is more true? What happened in these 50 people or what people have used for 1,000 years and it worked for them? So for me, I base a lot of that research on historical experience of what has been the use of these plants.

[00:25:24] And that's how I choose the plants that are part of the product. And you talked about history years. Here's a cool story that you may enjoy. So I published my book tracking the stem cell code, and there's a professor of Chinese medicine at Harvard that reads the book.

[00:25:39] So she reached out to me, and then she's saying it's interesting because when you describe adult stem cells and embryonic stem cells, it reminded her-- and her expertise, she's an American, but she learned Chinese to go and read super ancient Chinese text.

[00:25:55] **Dave:** Love that. Yeah.

[00:25:56] **Christian:** So she's at Harvard with gloves turning pages of these old books, and her quest was what was lost between ancient Chinese medicine when it converts to what is called today traditional Chinese medicine, when all these texts decimated.

[00:26:11] **Dave:** There's the five elements, old version, and then there's the new stuff that. The new stuff, the Chinese government actually neutered it before they let it into the world.

[00:26:17] **Christian:** Something like that. But she found in there that you know about the qi, but there's another source of vital force deeper than the qi, and it's the jing. And she said in ancient Chinese medicine, there were two jings. The primordial jing that is there on the day of your, and then the postnatal jing that is there for your life force as you grow in life. And the parameters or the description of these two profiled exactly the description of embryonic stem cells, the day of conception, and adult stem cells.

[00:26:53] So I ask her, "What plants are known to support the jing?" And she says, "Two. Fo-Ti stimulates the jing. Goji berry circulate the jing." So I go into the lab. I test Fo-Ti. It triggers stem cell release. Goji berry makes stem cells migrate into tissues. So that means ancient Chinese medicine already understood from a practical standpoint, stem cells, they just did not

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know that there was a cellular counterpart that was identified to a cell. But conceptually, 5,000 years ago, it was there.

[00:27:26] **Dave:** So I know several very high-level medical intuitives. Now, if you're listening to this and you're a doctor, either your ears prick up or you're saying, good God, I thought Dave was credible. So just hear me out. A couple of these are very high-level doctors, and behind closed doors, when their medical license isn't at risk, they'll say, I walk into the room, and I look at the person, and I just know, and then I run the labs to confirm what I saw. You ever seen this?

[00:27:56] **Christian:** Of course.

[00:27:57] **Dave:** And they teach this stuff in acupuncture school with reiki and hands-on healing. So this is a human capability. It's documented. It's been studied. Joe Dispenza writes about it, but it still raises people's hackles. So if hackles are raised, get a therapist. Be curious. And I've had my own stem cells. These were fat derived cells, culture expanded, and injected at the same time.

[00:28:21] I had other types of cells called V cells. We'll ask you about those in a minute. And without mentioning that, one of the medical intuitive says, oh, you just had a treatment, but you look different this time. Normally when I see that, they're these little gold things floating around in you, little swarm of them all over. But you have gold, like a platinum color. They're different. What is that? That's cool, isn't it?

[00:28:45] So yes, there are things that we can pick up, things that-- and I've worked with some very high-level Chinese medicine people. Yeah, they have superpowers. Here's my question for you, though. So let's say we have both of those. You've got goji berry. How much goji berry would you have to eat in order to get this result versus using an extract in STEMREGEN? I find the doses are so big for most things that no one's going to ever do it.

[00:29:08] **Christian:** That is the secret of STEMREGEN. You take these plants and you concentrate. And I don't isolate compounds because my belief from a scientific perspective is that even though you identify a compound that could be your active compound in the natural plant, you have a soup of compounds and they all work together.

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[00:29:31] So I like make crude extract from a plant. Like in sea buckthorn berry, we have the polyphenol family, if want, but we use all of them. So in that way, these are all concentrated plant extracts. So you may have to eat, I don't know, a whole bowl of sea buckthorn berries to get the dose that is needed to get the effect, and so on for each of these plants. So you would have to eat quite a bit to get the effect that you're looking for.

[00:29:56] **Dave:** It's frankly not possible either. And things like goji berry, they're a nightshade. So if you're like me and you're nightshade sensitive, which is genetic, you eat enough goji berries to get this effect, you're going to get arthritis from it. But if you get the extract, it doesn't have lectins and you don't get the problem. In fact, I even grow sea buckthorn on my farm up on Vancouver Island because it's one of those just interesting plants, right?

[00:30:21] **Christian:** It is. Very different at sea level compared to altitude, the biochemistry.

[00:30:26] **Dave:** It's a fair point. When you have high altitude or you have high temperatures, it changes the amount of polyphenols dramatically, even in coffee. So they have to be grown right. They have to be harvested right, processed right. Because you're an herbalist and a stem cell scientist, you can pull this off.

[00:30:40] **Christian:** What we use comes from about 15,000 feet in on the Tibetan plateau. This is where it's coming from.

[00:30:47] **Dave:** And that was where the original idea for Bulletproof Coffee came from, was in Mount Kash at 18,000 feet on the Tibetan Plateau. There's a lot of interesting stuff up there, and some of the most impactful longevity of substances, quadriceps, the stuff that works best comes from up there. So yeah, something weird about less oxygen, less atmospheric pressure. I should mention that STEMREGEN will end you. Our title sponsors for the 10th annual Biohacking Conference in Dallas at the end of May and beginning of June, thank you for doing that. And if you listen to this and you want to know everything there is to know about this confluence of herbalism and supplements and hardcore stem cell science, come to the biohacking conference. It's biohackingconference.com, and you'll actually be there. People can hang out with you. You'll be at your booth. You'll be on stage. It's going to be a lot of fun. So biohackingconference.com, guys.

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[00:31:42] **Christian:** And Dave, thank you. It's our honor to be there, and thank you for the opportunity.

[00:31:47] **Dave:** You're so welcome. Part of the mission in creating biohacking, number one, is I didn't trademark the name. I want this to be a global movement. And it is. It's a \$10 billion industry now that started from, 100 people at a bar at the first biohacking conference a decade ago. Pretty incredible. And it's expensive.

[00:32:04] There were times when I was so desperate my brain didn't work. I was spending 20% of my take-home income on just staying healthy so that I could keep working. And no one should ever have to be there.

[00:32:14] And now I've gone out and I've tried all the stuff that the crazy billionaires do, and I write books about that. The big longevity book, Smarter Not Harder, is based on Upgrade Labs research. The problem is it's still too expensive. So when you came along and we sat down, we've had several really in-depth conversations before I would even let you think about sponsoring the conference because I don't want anything that isn't real to come in. You can go to stemregen.co/dave, and Christian will give you 20% off. What this is is a quantum jump in letting an affordable version of stem cells come in. So before, if it was, you're going to need 10,000 to a \$100,000 to do this, now you need under \$1,000 to take it for several months, and maybe you don't do it all the time because it's not in your budget, but maybe you got injured. Maybe you're going on a kick for the first three months of the year.

[00:33:10] So you do this. You get your upgrade, and you wait a while and do it again. And as you become more successful, you take it more often. So lowering the cost of access to vibrant energy and health is a big part of biohacking. This is a human-- I don't call it human right because you're not entitled to this, but you are entitled to control the biology around you.

[00:33:30] So when someone tells you you're not allowed to buy something to stay warm, or you're not allowed to turn the lights down, that person doesn't understand the laws of life, and that person probably will end up being ground up for food at some point. Well, because that happens to all of us when we die. That's what I'm talking about. Or maybe burned.

[00:33:52] **Christian:** You're talking about this. What I'm telling you here is a true story. Probably it's what, 2001, 2002? 2001, and I read this article, Turning Blood Into Brain. It was an

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article that was published in 2001, January, 2001, I believe. And it's the first observation of stem cells leaving the bone marrow and going to the brain. And I'm looking at this, and I'm a brain researcher by training. We don't regenerate the brain. That was in 2001. The brain does not regenerate. This is what we were all taught.

[00:34:23] **Dave:** It's so crazy, right?

[00:34:25] **Christian:** Today it's crazy to think about it. But also stem cells do not become cells about their tissues, only blood cells. So to see a stem cells going into the brain-- so I read this article, dug in the literature, found other article, start to think about this blue-green algae supporting stem cells. We did a test. It worked. We made an extract.

[00:34:44] I shipped capsules of this to a friend of mine in France, and I say, this is a wild idea here, but if I'm right, we should see great result for this. So he gave the product to people with severe emphysema, severe conditions. And he came back with data. And when I got back this data, literally the download here, I'm thinking, my God, we are putting an end to disease.

[00:35:08] **Dave:** Wow.

[00:35:09] **Christian:** And we're 20-some years later and the concept is just hitting, just preconceived ideas, marketplace, academic forces, everything. But what you just described there when you're talking about this can really change people's life, that was my thought 20 years ago, and I still fully believe in it. If people start to support their stem cells, I think we'll have a different world.

[00:35:36] **Dave:** Is it ethical for any government to block access to any therapeutic for someone who's on their deathbed and at late-stage disease?

[00:35:50] **Christian:** I think the question there now will be, if I take their argument will be to say, then you open the door for just about anything. So that means anybody dying becomes susceptible here to be taken advantage of.

[00:36:04] **Dave:** You mean by the pharmaceutical industry or by someone else?

[00:36:07] **Christian:** Anybody.

[00:36:07] **Dave:** So I thought you were talking about chemotherapy for a minute there.

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[00:36:10] **Christian:** But that's where I'm going with this. My point is that if you take what you just said right now and you apply it to stem cells, I think that there's something here that is barely talked about, and it's huge. And it's the fact that in the entire history of pharma, curing has never been part of the equation.

[00:36:32] And in many, many dietary supplements, alternative approaches, the idea here is to remove the problem, patch the problem, increase your quality of life. But curing is oftentimes not part of the equation. Stem cells brought cure. You can repair and get rid of the problem. It is the biggest threat to big pharma that pharma has ever seen.

[00:36:59] For that reason, they game with a huge, huge, huge media campaign invisible to most people. In the early 2000, this story that using stem cells means killing babies, it has never been that, ever.

[00:37:14] **Dave:** Yeah.

[00:37:14] **Christian:** That it's dangerous, banning stem cells because it could be dangerous for you, all of this is just pharma trying to suppress something that could put an end to disease.

[00:37:26] **Dave:** It's funny how they're only dangerous in the US.

[00:37:29] **Christian:** There you go.

[00:37:30] **Dave:** And Americans have mostly had to fly to Thailand or Mexico or anywhere else in the world to have access to these things. Big pharma has used regulatory blockade to increase the cost of medicine here. And I think a lot of listeners know this. A lot of people who this is your first show, that might sound shocking, but the evidence is really clear, and it's actually sad.

[00:37:54] And so I would just say if the doctor says if you don't do what I say, you'll be dead in seven days, they might be telling you the truth if you're average. But if you've supported your health, you have abundant stem cells, you eat the right thing, your mitochondria are 20 years younger, maybe you're not average. Because it turns out 20% of people might live for five years, not seven days. So the average doesn't apply to anyone unless they're average.

[00:38:21] So that's the first thing to understand. So this is why you want to be strong and healthy before anything happens, whether it's a car accident or whatever disease. You're probably

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less likely to get the disease. And then when they say there's no hope or spend a million dollars and you might live three months longer, then you say, maybe that's just not worth it.

[00:38:39] Or you say, maybe I'll spend half of that amount on crazy hyperthermia, hyperbaric chambers and all the treatments that might work because at a minimum they'll probably improve your quality of life, whereas some of the Western approaches make you really sick.

[00:38:56] So it's your right to do that. And I was being facetious earlier, but I do know that if I was facing a death sentence from something, I would do what so many people have done, is you just do all of the biohacks all at once. And suddenly the body does crazy stuff. And like you said, stem cells are important.

[00:39:19] Let me ask you this. One of the risks of taking my own bone marrow out and then reinjecting it is that if I had bone marrow cancer, I'd be spreading it all over the body. If I'm taking STEMREGEN and I'm releasing my own stem cells, is there any risk of cancer?

[00:39:37] **Christian:** It's a tough question. And I'll try to answer it in different ways. So that question came up when we launched the first product in 2005. We had to test for it. We did a mouse study in which we injected human breast cancer cells and implanted them in the mice. Two groups, one group placebo. The other group, we gave them this blue-green algae extract at the time. And what we got in six weeks is a 30% suppression of tumor growth.

[00:40:04] And what I wanted to say here, I'm not saying take this product, it's anti cancer, but generally speaking, all the plants that are now in STEMREGEN, it just happens that they've all been used historically for cancer. Sea buckthorn berry, used for lung cancer.

[00:40:20] **Dave:** Yeah, I've seen that.

[00:40:21] **Christian:** They've all been used for cancer. And about 10, 15 years ago, I had a colleague who was working with a cutting-edge treatment for melanomas. And what he had found is that if you take the cytokines that is used to turn a stem cell into a keratinocyte, skin stem cells into keratinocytes, and you apply that, you take that in a cream and just apply it on the melanoma, within a few weeks, it's gone.

[00:40:48] And the concept here is that a highly proliferative cells cannot differentiate and proliferate at the same time. These are two different functions. So if you force it to transform into

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skin cells, it stops proliferating. So what has been seen historically, you go into many places where they do stem cell injection. You go for a stem cell injection for your diabetes, and you happen to have prostate cancer.

[00:41:12] So many have observed that suddenly their cancer is gone. We have seen this. We will never promote it for this, but over the years working with these plants, I've had so many stories of people coming back about cancers. So all of this is leading me to this understanding, is that when a stem cell migrates into a tissue, it will do what a stem cell does, meaning release compounds to coordinate proliferation.

[00:41:37] **Dave:** Like exosomes.

[00:41:38] **Christian:** Exosomes. And then release exosomes as they differentiate. So as they differentiate, they lead and entrain their sister cells behind that is proliferative and suddenly make them differentiate and you've put a stop to tumor growth. That is what we have seen over the years. Now, if you're talking about extracting stem cells from the bone marrow that are cancerous potentially in the bone marrow and then injecting them in the body, we don't do that and--

[00:42:05] **Dave:** That's a known risk. Right.

[00:42:08] **Christian:** And generally speaking, I don't know if we have enough years of experience to see if that can lead to a problem or if they just own back to the bone marrow and there's no additional consequence. I don't know.

[00:42:21] **Dave:** So with causing your own body to secrete more of your bone marrow cells, there's no evidence that that would release the cancerous ones if you even had them. And it's a rare cancer anyway.

[00:42:33] **Christian:** Yeah, but at least none. We have not seen--

[00:42:34] **Dave:** You've never seen that.

[00:42:35] **Christian:** For many years, many years I was saying, if you have any problem, disease of the bone marrow, don't take any of these plans that I've worked with over the years. And I still say that as an official warning if you want. However, over the years, as I'm giving lectures in different countries, twice, I've had doctors coming and telling me in their experience

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and their assessment, they think that it was unethical for me to make this warning because they had patients that took these products and then they got better.

[00:43:06] With leukemia, neutropenia, too many platelets, too little platelets, all these different kinds of problems with the bone marrow, many of them normalized. I still don't use this as a claim. I will never recommend the product for that. But I've had enough distance and perspective right now that I would say if my mother or my sister had the problem, I would give them the product.

[00:43:29] **Dave:** Wouldn't it be interesting if the Hippocratic Oath was not first do no harm, which is stupid? It's entirely possible and beneficial to take a 1% risk of harm for a 99% chance of making someone live twice as long. I'll sign up for that twice. That would be a great deal.

[00:43:46] **Christian:** If this oath was respected, we would not use drugs that are the third or fourth leading cause of death in the country.

[00:43:53] **Dave:** If the oath was respected, we wouldn't have most politicians. So anyway, there's one in particular who's a big environmental advocate who I would absolutely take out of that blanket statement about politicians, and I'm sure there's other good ones.

[00:44:10] I'd like to ask you a question just from your herbalist brain. For years, I've been interested in ways to, we'll say, enhance liver function because we swim in more toxins than we ever have before. They're manmade toxins. They're environmental toxins. They're even inflammatory things made by our body because we're exposed to LED lighting and all kinds of stuff. So the level is higher.

[00:44:34] And also to enhance kidney function. Because like pigs, humans use our kidneys for a lot more toxins than, say, rats. The reason rats don't die of their diet is because their livers handle more toxins than we do. So kidney stones were a thing. And I am extra protective of my own kidney function because I know that living to 180, the fifth killer after the big four killers in my book-- others who've written later books call them the four Horsemen, but I call them the four killers.

[00:45:06] I didn't want to be too, I don't know, predictable, but you've got cardiovascular disease, diabetes, Alzheimer's, and cancer. And those are all linked to diabetes. But the one right

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after that would be kidney function. People die of high blood pressure because their kidney shut down.

[00:45:23] **Christian:** Kidney problem is always secondary to one of the main problems.

[00:45:26] **Dave:** So protecting your kidneys would be number five if you were going to do that. And kidney stones are a massive issue today, and they're a much bigger issue than ever before. Not because of what most people think-- meat and beer, those are phosphate stones, about 25%. 70% of stones are from kale, and spinach, and raspberries, and beets, and almonds. They're oxalic acid or oxalates.

[00:45:49] So to the people who say, you have to exercise all the time, it's the only thing you do to live longer, maybe you should cut oxalate so you still have kidneys when you're old. That might make you live longer. And the evidence, we'll see what happens there. Let's race. So when you look at kidneys, there's one herb that I've looked at for a long period of time called chanca piedra.

[00:46:09] **Christian:** Fabulous.

[00:46:10] **Dave:** Tell me what this herb is and what it does for kidneys and kidney stones. And does it work on oxalates?

[00:46:15] **Christian:** It does. So chanca piedra, as you know, in Spanish means stone breaker. So it's Latin name is *Phyllanthus niruri*. It's a weed. It grows like everywhere in South America. It is one of these examples of morphism.

[00:46:30] You look at the plant and the plant grows and it has like stones hanging from one of the branch. And so it tells you this for-- by the way, I did ask a shaman in South America, how do you know that this is-- think about this. For the past four centuries, they're calling that plant chanca piedra. How did they know that that plant breaks stone? They didn't even know what a kidney was. So how do you call this plant kidney stone? And they say, the plant told me.

[00:47:00] **Dave:** Yeah.

[00:47:00] **Christian:** So they take ayahuasca, they journey, and then the plants tell them what they're good for. So for centuries, they're using chanca piedra as stone breaker to break kidney stone. And a few years ago, probably 10 years ago now, they did those studies. And indeed, if

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you take a tea of chanca piedra, what it will do is that it will fracture a kidney stone in a million small pieces and you just pass them without even noticing it.

[00:47:25] **Dave:** Wow.

[00:47:25] **Christian:** I've never had kidney stone, but I've had friends who came with kidney stone, and so far, I would say five out of five, within about a week, 10 days, they're passed. They're gone.

[00:47:34] **Dave:** Wow. I am fortunate that I've never had a kidney stone. I also have oxalate buildup because I unfortunately was a raw vegan and just a regular vegan before that and before that, and even after that. I was just eating a lot of the paleo foods. It's now 10 years old, the Bulletproof Diet. If I rewrote it, I would move almonds, raspberries, and sweet potatoes down the list.

[00:47:57] You can still eat them, but especially raspberries, they're ridiculously high in oxalate. And I look back and say, wow, there was a time where I was eating two baskets of raspberries a day, every day because they're healthy. And I had to go to urologist and get a camera stuck in my pee hole all the way up. That was very traumatic, by the way.

[00:48:17] **Christian:** I've never recovered.

[00:48:18] **Dave:** They're like, why do you have to pee 20 times a day? And I couldn't tell. And it was because I was getting too much oxalate that was irritating my urethra. So I was close to kidney stones, but I didn't get it, and I figured that out. So do we have any evidence that chanca piedra would break up oxalates elsewhere in the body? Because there's a lot of people listening who have oxalate toxicity from being vegan and they're recovering like I have been from the vegan diet.

[00:48:40] **Christian:** I have not seen that work. It would be very interesting to look at it. The only thing I would add to that story is that the formation of any kind of salt crystals in the body, regardless of their source, is highly dependent on pH as well. So it's also pH. It's your intake, but it has a lot to do with the terrain as well.

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[00:49:02] So you change the pH of the terrain and immediately you also change a lot of these problems. So I would say play with pH and something like chanca piedra. Now, for deposit elsewhere, I'll look into this. It'll be interesting.

[00:49:15] **Dave:** I'm getting the intuitive hit and sometimes that's just where they come from that there might be a relationship between faster excretion of oxalate. And I'm to the point where I don't have a lot of oxalate left, and I can feel when I eat high oxalate foods. I'm like, go look. That old surgery hurts. But if I don't eat the stuff, I get nothing. I'm so flexible, and people give me body work, and they're like, you have the tissues of a young person. And they talk about tissue quality.

[00:49:40] **Christian:** You're young.

[00:49:41] **Dave:** And I think that removing these toxins and the more vegan you are, the more than you get, black beans, and all that stuff. Just very, very big sources. And it's something that isn't broken down by heat. So maybe that herb could be really good. We also talked about pH.

[00:49:57] Now, there are studies, and I know this is going to fly in the face of doctors who say it's not possible, but 15% increase in life span, for the skeptics out there, it's from baking soda. People who take a tablespoon over, I think a couple of doses of baking soda over time, which you know lowers pH a lot more than alkaline water, which is dumb. So that's interesting. And these studies go back to the '80s. You're familiar with them?

[00:50:26] **Christian:** I'm not.

[00:50:27] **Dave:** So I referenced them in Superhuman. So you could handle your pH that way. What I'm doing today is I use various forms of citrate with minerals.

[00:50:37] **Christian:** That's what I do.

[00:50:37] **Dave:** That's what you do? How much do you take? What do you take?

[00:50:39] **Christian:** I've done this over the years with lemon juice.

[00:50:42] **Dave:** There you go.

[00:50:42] **Christian:** So I would squeeze a lemon, and I would dilute it a little bit of water and do that every day. And there's no better way that I know of of handling pH in the body than doing

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a simple practice like this because I'm with you. High pH water, alkaline water, I think it flies in the face of human physiology. You've got pH segregated into your digestive system for a very, very good reason.

[00:51:09] When you start to increase the pH in your stomach, you've just destroyed digestion. There are so many problems. Antacids are the same. So there's so many problems that comes down the road from this. I've never wrapped my mind around this.

[00:51:25] **Dave:** Why when we take baking soda does it not do that?

[00:51:27] **Christian:** That's why I'm telling you, I don't know that literature because my first reaction would be to say baking soda should do something similar. So I don't know.

[00:51:36] **Dave:** Well, number one, you take baking soda on an empty stomach and it's--

[00:51:39] **Christian:** Then it changes.

[00:51:40] **Dave:** Yeah. And what it does is it increases the bicarbonate buffer that the body needs to manage pH. So later on in the cycle, it can do it. When you're taking citrate, what citrate does, whether it's from lemon juice or sodium citrate or potassium citrate or something, actually it lowers your pH at first because it's acidic, but then when it metabolizes, it increases your pH, which makes you more neutral.

[00:52:00] **Christian:** Baking soda will do something like this. It's not high pH on its own. It's high pH because of its chemistry. So when you consume it, it could very well have an effect like you're describing without necessarily changing the pH in the stomach.

[00:52:12] **Dave:** I think it'll straight up cancel hydrochloric acid in the stomach. So if you take it with a meal, you will have no stomach acid. But if it's on an empty stomach, same thing with lemon juice, that's not going to hurt your gut. You take it with food-- I've recommended since the one of the first few blog posts, good practice, sea salt, lemon juice in the morning, because decreasing your pH, which means raising acidity, gives you energy.

[00:52:38] And it's supposed to have an increase in acidity from circadian biology in the morning, and then it drops over time as you metabolize it. So you and I have a similar approach there. I use lemon juice and citric acid at various times throughout the day. But what I want to

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know is with STEMREGEN, is there anything in it that changes my pH or do I need to change my pH to make it work better? What are stem cells like?

[00:53:01] **Christian:** First answer will be, let's say the blue-green algae extract, which is what I spend-- I did probably, like what, 10, 15 years of research on that before I started to use the other ones. I have tons of background on that one. That one blue-green algae is one of the plant that I have used with which I've heard the most people coming back and talking about how it has helped regulate their pH.

[00:53:24] So I know that that plan helps pH. For the product as a whole, I don't have data. What I can tell you is that I have not seen so far-- we're talking here 20 years of working with these plants-- emerge from the stories that I've heard and the benefits that I've heard. I'm talking quadriplegics getting mobility.

[00:53:44] I'm talking huge things. We're having a study right now in congestive heart failure. This one is not double blind, so open-label study. But all the participant in the study so far after six months have normal cardiac function. This started with stable, chronic congestive heart failure.

[00:54:01] My point is that all these stories, we have never monitored what's their diet? What's their exercise? What they do, what's their pH? So it's almost like the result that we have seen have been, I wouldn't say independent from these other parameters. I'm sure there are things we can do that will support stem cell function, but so far, I can say it looks like there's nothing that is a must that must be added that suddenly makes it work like much better.

[00:54:29] **Dave:** Hmm. Okay. And so you don't have to tweak anything.

[00:54:34] **Christian:** The only thing that I have seen, not by experience, I have read in the scientific literature, the keto diet or ketosis will support the role of stem cells in the body.

[00:54:45] **Dave:** Yes, it will.

[00:54:46] **Christian:** That's the only thing I've heard.

[00:54:47] **Dave:** Yeah, it definitely does that. And it's funny. There's still some keto skeptics out there. At the same time, there's keto bros, and it drives me nuts because I actually wrote the Bulletproof Diet, which has helped people lose a couple million pounds. And I wrote it because I

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did the keto diet in the '90s. It's called Atkins. And I lost 50 pounds of the 100 I had to lose, and the other 50 would not move.

[00:55:11] And it's because I was eating bad oils, and I was eating artificial sweeteners, and I was eating processed foods, and they're all keto. They didn't have carbs, but that didn't mean they worked because long-term keto breaks most people and has to do with your gut lining.

[00:55:26] So the Bulletproof Diet is, use ketosis as a scalpel. Go in for a few days. Use intermittent fasting with or without butter in your coffee. Now, it would be Danger coffee. And then you have some carbs, and so you go in and out. That appears to support everything better than just keto or just fasting or anything else. And I think it might be because glial cells in the brain require glucose much more so than ketones.

[00:55:53] Maintenance cells need sugar, and neurons need ketones. So if you only do ketones, you're not going to get what you want. So it's like, go back and forth. Why does MCT oil reverse Alzheimer's in studies? Oh, by the way, guys, when I was selling MCT oil, I wasn't allowed to tell you that, but I'm not selling MCT oil anymore.

[00:56:14] So there are studies that show that MCT oil does reverse Alzheimer's disease, phase two clinical trials as medical food. So did I magically reduce the incidence of Alzheimer's in our population by promoting coffee, which also has effects? If you were to go to a search engine besides Google that provides accurate health information, then you would find some interesting things about coffee.

[00:56:36] And then you look at MCT oil and Alzheimer's. You go, oh, maybe this is something that also will support stem cell function. So if I was going to go on STEMREGEN as a biohacker, and I am on STEMREGEN, and say, okay, if I'm going to do a stem cell kick, and by the way, this is the same if I was going to get it injected somewhere in Mexico or something, get my own cells cultured, expanded, I would want to do hyperbaric.

[00:57:02] We know that's going to do it. I would want to have MCT oil or go in ketosis. MCT oil gives you enough ketones. You get the benefits of it. You could also use some exogenous ketones, but not ketone salts. You'd use something like Ketone-IQ, which works better than salts because salts are apparently toxic to mitochondria according to Dr. Veach who studied them for only 40 years.

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[00:57:24] I think I was the last guy to interview him on this show before he passed away when he was in his late 70s. So what you find is metabolic enhancement plus stem cells equals amazing. Other thing I would do is I'd go into an Upgrade Labs.

[00:57:38] I would do cryotherapy. By the way, guys, you want to open an Upgrade Labs in your neighborhood? It's a franchise. ownanupgradelabs.com, and you could open one there. We've got 27 locations across the US and Canada, and more growing every day. Would love to talk with you about that. ownanupgradelabs.com.

[00:57:57] But you could do cryo, including whole body, including your face. It works differently and in less time than a cold plunge. And then you might also do light therapy, and we have the whole body intense frequency, specific light therapy at Upgrade Labs. All of the biohacks that you would expect, pulse EMF.

[00:58:15] **Christian:** PEMF.

[00:58:15] **Dave:** Gee, does that work on stem cells? What do you know? It does. So you stack everything. And it's funny. If you were doing a clinical study, you would actually not allow people to do anything because you're trying to isolate this one thing to see if it works, and it's dumb. Here's an example of that.

[00:58:35] Okay, we're going to test exercise, but we want you to not breathe because we want to know the effects of exercise. You're like, that doesn't seem very smart. Well, it's because we're a system. So when you are investing in STEMREGEN, should you get enough sleep? What do you think?

[00:58:52] **Christian:** Let me think.

[00:58:54] **Dave:** No trials. You can't say anything, right? So I would say stack your biohacks, do the free ones. They're in Smarter Not Harder. They're in Superhuman for longevity, and then add in a stem cell enhancer, add in STEMREGEN, and then it's going to make the investment in a supplement pay its full dividends. Is that a good approach?

[00:59:13] **Christian:** Absolutely. When I said before, historically, we have seen results no matter what people do, I do not mean that there's nothing else you can do to get better results. Absolutely not. Everything that you described here are things that we're working on, meaning

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when you release stem cells, you want to lead them and direct them somewhere. Red lights, PEMF will work very well for that. One thing that will be very useful, I think it's something that you do regularly, nattokinase.

[00:59:38] So increase the fluidity of the blood. Nitric oxide, open capillaries because a stem cell can be as big as 20 micron. Your capillaries are 12. So for stem cells to circulate, first, you need to have a good lipid membrane so that these cells are flexible. So a lot of omega-3s in your diet so that you make all the membranes more flexible. Then nitric oxide to dilate these capillaries. You can even think of compounds like [Inaudible] that will basically rebuild glycocalyx in capillaries.

[01:00:13] **Dave:** This is in STEMREGEN.

[01:00:14] **Christian:** It's not in STEMREGEN, but we're coming with another product for circulation for the exact purpose that is going to enhance circulation from four five different angles-- capillary integrity, blood fluidity, membrane fluidity, all that kind of stuff, and suppress systemic inflammation.

[01:00:31] Because systemic inflammation is noise in your body for stem cells. You suppress it, you increase your signal to noise ratio of the tissues that need repair. So adding to everything that you described, improve blood circulation and capillaries and suppress systemic inflammation.

[01:00:48] **Dave:** That's so smart. And if you think about it, if everything's inflamed because you're eating omega-6 oils, because you thought the vegan diet would be good for you and you got oxalates throughout your body forming tiny razor sharp crystals, the stem cells are just going to diffuse everywhere.

[01:01:03] If instead you don't do the dumb things that you thought were good-- it's okay, I did them too-- and your body calms down, they're still going to be hotspots, and then all of the stem cells you release with STEMREGEN will go to the hotspots instead of going everywhere. That makes so much sense.

[01:01:19] **Christian:** Actually it's fascinating because we-- I came across this I think it was 2002, 2003. We had access to a 100 or two patients with Alzheimer's at a local hospital in Klamath Falls. And so I thought at the time, early thought here, I bet you that there's a link

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between the degree of evolution of Alzheimer's and the number of stem cells in circulation. We know today that it's true for almost every condition except Alzheimer's.

[01:01:45] **Dave:** Hmm.

[01:01:45] **Christian:** Some studies have revealed it with Alzheimer's, but some studies have been published showing that in Alzheimer's patient you see sometimes more stem cells. And that's what we saw, but we also measured inflammation marker in the blood.

[01:01:58] And what we saw is a direct correlation between systemic inflammation and the development of Alzheimer's. And then we look at the phenotype of stem cells. What we discovered is that they're there in the blood, but they have lost the molecules, the protein that they use, the receptors that they use to detect the tissue calling for repair.

[01:02:17] So they're in the blood, but systemic inflammation has nullified their ability to see where to go in the body. I can go into more detail as to how it works, what's the mechanism behind it, but from that work, I start to think one day I will bring a companion product to STEMREGEN. Because if you really want to maximize the impact, you need to suppress systemic inflammation.

[01:02:41] **Dave:** I have the genetics that make me predisposed to systemic inflammation in response to certain toxins. I've got the MTHFR genes. I've got HLA-DR genes that make me more susceptible to fat-based toxins. And a lot of people don't know this. You go, oh, my family just seems to get sick a lot and we have all these weird things. Well, you probably have some of those things.

[01:03:00] So I've managed to track those down, and so I address them, and the result is I'm a 6% body fat and used to weigh 300 pounds, because I know how to manage my toxic load and my inflammation. So if you can get a supplement that does that, and I have been taking serrapeptase, a cousin of nattokinase for 25 years because it breaks down stickiness in my blood, because, oh, I had a lab test in my 20s. They said, Dave, you could easily die of a stroke or heart attack tomorrow.

[01:03:27] Your blood is like sludge. They were shocked. So I'm like, well, maybe I should break down some thrombin and fibrinogen. And I do that on a regular basis, but that means the delivery

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system for stem cells is already optimized. Also in exercise, it works better. So there's all these little things you can do.

[01:03:43] And since I probably have the worst biology, the worst childhood, 15 years of antibiotics every month because of chronic sinus infections, and strep throat, and all this stuff, if I can do this, it should be far easier for anyone listening to the show. And you shouldn't have to spend \$2 million to reverse your age the way I have and the way, certainly Bryan Johnson who was just on the show, \$2 million a year.

[01:04:06] If you get it right in your 20s, it's not that expensive. It's way cheaper. You're talking more like \$20,000 over the first 10 years from 20 to 30. It's not much. It's still real money, but compared to what's going to cost you later, and besides the whole time you have more energy, and you're running circles around your friends, you're getting the promotion, you end up having three spouses, whatever you're into, I'm down with whatever.

[01:04:31] But basically you have more energy than everyone. And people say, well, how do you do it all? You do it because you manage your biology. So the things that we're sharing here, you've taken 20 plus years of deep research to share this with people.

[01:04:45] **Christian:** Yeah, the concept of biohacking that you've put forth, I remember when we discovered the first effect of this blue-green algae and start to develop the first product, so in 2003, 2004, at that time, the message that I was starting to put out there is that right now the best of health popular medicine is prevention.

[01:05:07] But prevention is just to prevent the problem. You're still not ahead. You just don't have the problem. So let's talk about really optimizing health. Reach the best health that your body can have, and that is what we're talking about here, stem cells, but we talk about circulation. I still think today it's probably one of the aspect of health that is still not properly talked about.

[01:05:30] **Dave:** 5%.

[01:05:32] **Christian:** Anything you put into your blood. You want to improve mitochondrial function? Well, whatever you take must go into your capillaries to reach cells. Nothing in your blood means anything if your blood does not properly reach fine capillaries. It's your delivery

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system. That's where nutrient exchange, gas exchange, cell exchange is taking place. If you don't have good capillary circulation, doesn't matter what's in your blood.

[01:05:55] **Dave:** It's almost like you'd want to have some infrared light therapy--

[01:05:58] **Christian:** Something like that.

[01:05:59] **Dave:** Like you could get at Upgrade Labs. Why? Well, it turns out there's some research that I helped to fund at the University of Washington about exclusion on water and how blood cells are bigger than the capillaries they go through. And it's physically impossible. Stem cells are too. It's physically impossible except it works. And it works because of the way water changes when it's up against a membrane.

[01:06:24] **Christian:** And the cell is squeezing.

[01:06:25] **Dave:** Yeah. They squeeze in.

[01:06:27] **Christian:** There's a lot of mechanics.

[01:06:28] **Dave:** A lot of cool mechanical stuff that no drug company's ever going to fund studies on, but it's core biology research. So I'm a huge believer in optimizing that. So if you take STEMREGEN, go lay on our infrared light bed at your nearest Upgrade Labs, or get some sunshine. You don't have to go spend money. If you're in a place where there is sun, go out there. Take off your clothes. Don't put on some dumb sunblock for a while.

[01:06:53] You don't need to get a sunburn. That's bad. But that's going to change the ability of the stem cells from STEMREGEN to get where they need to go. And this is one of those things I think is missing from a lot of the conversations. The drug companies actually say, either we're not going to measure that, and they're going to look you straight in the eye and say, we controlled for all variables, which they didn't.

[01:07:12] Or they're going to say, you're not allowed to go in the sunshine because it might change the study. But what if you need the thing and sunshine and neither one works alone? And that's how life works.

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[01:07:22] **Christian:** Uh-huh. Yeah. It's differently a huge flaw of so-called double-blind placebo-controlled studies, which it's funny because it is still considered by the majority as the gold standard.

[01:07:34] **Dave:** Mm-hmm.

[01:07:34] **Christian:** And it's not. Honestly, it shows you what's something isolated will do, but you'll never that thing isolated in your life and you'll get the best results most of the time when it's stacked with something else. To me, I listen much more to life experience than to a study. They have their place. But my experience is so much valuable.

[01:07:56] **Dave:** All the best doctors who actually see patients and make them younger, they have clinical experience doing that. And they've seen what works and seen what doesn't. And then you have some doctors who like jump on the bandwagon, like, yeah, yeah, I'm an anti-aging doctor, but I was a surgeon three years ago.

[01:08:11] What I find there is they don't have the clinical experience because they haven't been in it. So they're going to say, exercise. Yeah, exercise is good for you, but more exercise isn't better. And there's tons of evidence for that. You want the blood circulation. You want the strength, and then you want the stem cell secretion to get rid of that pillar of aging. And then you go after the other ones in a structured way. But to measure results, you need to be able to look a clock, an aging clock.

[01:08:36] **Christian:** Mm-hmm.

[01:08:37] **Dave:** Are you familiar with things like aging clocks, like the Horvath clock, DNA methylation test to see how old and young you are? What do you think them?

[01:08:46] **Christian:** I've not looked at that in a detailed way. Let me talk, for example, telomere, which is also one of them. I don't believe in it.

[01:08:56] **Dave:** I don't either

[01:08:58] **Christian:** And the reason why I don't believe in it, I'll keep it simple, but first, where do you measure telomeres? You measure them in lymphocytes. They have a three months lifespan. It means nothing for your body. You need to measure that in the tissues, number one. Number two, telomere shortening in the cells in your tissues, it's a normal part of their life.

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[01:09:19] These cells divide. The stem cell gets from the bone marrow, is released, gets into a tissue. It starts to divide. It makes a population, a billion tissue cells at the end of these telomeres, and then the cells should disappear. Losing your telomeres in tissue, it's just a normal part of the life of a cell.

[01:09:37] **Dave:** Because new cells will come along.

[01:09:39] **Christian:** New cells will come along. So for me, honestly, what I think, you want to increase the telomere in your tissue, flood them with new stem cells that you've just released from your bone marrow, and now you have increased the number of new cells because what cells in your body have the longest telomere? The stem cells that have become a tissue cell. It has full length telomere.

[01:09:59] **Dave:** Cell turnover drives telomere length.

[01:10:03] **Christian:** Of course.

[01:10:03] **Dave:** Who would've thought? It's logical.

[01:10:04] **Christian:** The way to quantify, you quantify it as an average length of telomere. If you increase the number of new cells in your tissue, you've suddenly bump up your average telomere length. I think it's the most valuable way to increase telomere length.

[01:10:18] **Dave:** It's funny, stem cell exhaustion, and then tissue atrophy are some of the pillars of aging that I go after in Superhuman. And you've just addressed a major thing. I, in the early days, was really excited by telomere measurement technologies, but when I saw someone lose 20 years of age in one week from a blood--okay, this is BS.

[01:10:39] So do I look at telomeres? And if someone says, look, I can consistently make your telomeres 40% longer, that's actually interesting and useful. And if it happens across multiple people, we've got something good going on here. Would I rely on a single measurement of my telomeres to tell me anything? No. But I would use one of these very scientifically validated aging clocks. We've had hundreds of scientists around the world looking at more than 800,000 data points around DNA methylation to say, okay, do these predict when you're going to die? And they do within 10 years. So we now can say, how old are your tissues? And this is a

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fundamental breakthrough in the world of longevity. Otherwise, we'd have to test something and then 120 years later, we see how it works and we're never going to evolve as a society.

[01:11:27] So the longevity skeptics, the wolves in sheep clothing are out there saying, well, since I don't believe it's possible to extend human life, therefore, the research on aging clocks is "not scientific." And this is the kind of nonsensical thinking that happened-- Even Einstein was quoted saying, we'll never harness the breaking of the atom to make nuclear power. It's unthinkable. And we did it anyway. So the ability of some people to see the future is limited and the ability for other people to say, we're going to do this, dude, we're already doing it.

[01:12:05] We can measure that we're doing it. So to try and say the things that would validate STEMREGEN, and I would encourage you, take 10 people, give them a true age test, give them STEMREGEN for a few months, and do another true age test and look at their DNA methylation. You're going to see-- you've probably already done that, haven't you?

[01:12:21] **Christian:** We've not done that honestly. Here's where I stand with it, and I'm not against it at all. But my point is that you take a product and then you show me a result here. That's it. You've caught three years, let's say, in your age. I work with studies where I have a quadriplegics that now has mobility. I have somebody who has severe congestive heart failure and then is normal.

[01:12:43] I work with things like that have such an impact in quality of life. Whether they are three years younger with their telomeres or whatever, it's like so irrelevant. So the way that we developed the science, the experience that we've had never led me to think that it was something that really meant something. But in today's world, the way the market has evolved and the concept about aging has evolved, it could be interesting to look at it.

[01:13:12] **Dave:** I would highly encourage that kind of a study because you are hitting at least two of the pathways of aging of these seven killers that are in my books. So I think you're going to see massive results. And I want listeners to understand this is a time when you actually can become younger and stem cells are one of the major ways to do it. That's why you've been on the research on them.

[01:13:38] You wrote your first book in 2013 on them, and I've been doing them very actively for almost 10 years as well. To get more details and save 20%, go to stemregen.co/dave, and

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Christian will give you 20% off because you listened to the show, and I appreciate that. Christian, thank you for coming in and really bringing a new level of access to stem cell therapies for people that is far more affordable and accessible. Genuinely appreciate it.

[01:14:08] **Christian:** Thank you, Dave.

[01:14:09] **Dave:** Thank you.