

Dave Asprey ([00:01](#)):

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You are listening to the Human Upgrade with Dave Asprey. This is a special mini episode where I bring in the creator or an expert in some of the cool tech and gadgets that you will be able to try at this year's Biohacking Conference in Dallas, Texas. This is the first and largest and original biohacking conference where all the vendors go and all the top speakers. And here to share info with you today is Dr. Allen Meglin, who is an expert in hyperbaric and he's working with a company called Oxy Health, who's been a sponsor of the biohacking movement for years. Welcome to the show, Dr. Meglin.

Dr. Allen Meglin ([00:47](#)):

Thank you so much for having me. This is truly an honor.

Dave Asprey ([00:51](#)):

You've been speaking about the benefits of hyperbaric for what, about a decade now?

Dr. Allen Meglin ([00:56](#)):

Yeah, I think so.

Dave Asprey ([00:57](#)):

Why is it such a focus for you and your practice?

[\(01:01\)](#):

So just to tell you a little bit about my practice, we do functional medicine and in particular, I was trained as a stem cell scientist, and as I got better and better at stem cells, I found that I had to treat people with hyperbarics prior to receiving stem cells. This is based upon the terrain theory in which I really wanted to make the patient maximally receptive to the benefits of stem cells. So before planting the seed, which is the stem cells, I wanted to make sure that the ground was as fertile and as receptive as possible. Hence Hyperbarics.

[\(01:40\)](#):

Who would imagine that the human body would heal faster if it had enough oxygen, whether or not there were stem cells present? Well, it makes sense on its face, but there were a lot of Western trained doctors who would say it has nothing to do with it, but my experience in the biohacking world is that make the cells stronger and then the body can do more of what it wants to do.

[\(02:00\)](#):

What types of differences in outcomes with stem cells do you see when you use hyperbaric versus non hyperbaric?

Dr. Allen Meglin ([02:06](#)):

So some of the background science comes out of Israel and also Philadelphia, which demonstrates that hyperbarics is a very strong epigenetic tool and it turns on regenerative genes and turns off degenerative genes. It increases the length of telomeres and it activates stem cells and causes them to be released. In fact, a single treatment with hyperbarics at a particular pressure of two a TA at a time of 90 minutes results in a doubling of stem cells being released from the bone marrow. And so if you're a

stem cell believer, and I am, I believe that stem cells are really signaling cells, they tell your body what to do, they are able to perceive cells that are in danger, they're able to determine what the injury is and they can respond to that injury.

[\(03:07\)](#):

In short, stem cells have judgment and based on the signals that they perceive, they know what to do to try and fix the problem.

Dave Asprey [\(03:15\)](#):

My stem cells are very judgy. I've noticed that about myself. It's actually very true. What do they do? They float around, they find areas of inflammation, they stick to them, and then they pump out healing factors called exosomes and a bunch of other stuff, and then magically you get better. Is that a good layman's explanation?

Dr. Allen Meglin [\(03:35\)](#):

It really is almost like magic because of their ability to perceive cellular danger response and because of their ability to process the information related to the inflammation, they're able to say, I'm the best doctor in the world. I'm going to give you exactly what you need, no more, no less, and we're going to drive your own healing response in part by activating your stem cells.

[\(03:59\)](#):

Again, going back to the fertile ground theory, if I make your resident stem cells the best that they can be with hyperbarics, once I stimulate those stem cells into action, will get a great healing response.

Dave Asprey [\(04:13\)](#):

What else would stimulate stem cells in the realm of hyperbaric therapy? Does it matter the number of times I go up and down or is it the amount of total pressure? What are the variables that someone who's new to hyperbaric, I might just say I was under pressure? Walk me through the way of thinking about that.

Dr. Allen Meglin [\(04:30\)](#):

Well, you're really kind of the father of biohacking and you know more about hormetic responses than just about anybody in the world, and what hyperbarics does is it stresses your body and invites your body to respond, and that response is really reparative and regenerative in nature. So what hyperbarics does by exposing you to increased pressure at the mitochondrial level is stimulate all kinds of healing responses.

[\(05:01\)](#):

And the miracle that is hyperbarics is that it does two competing things simultaneously. On the one hand, it stresses you and replicates in some respects the benefits of a fight or flight response. And on the other hand, simultaneously it gives you the benefits of rest and relaxation and restoration. So hyperbaric is really a miracle treatment. It's foundational for everything that I do in part because when you're in the chamber, you're being stressed and your body is being told to adapt to these new stresses. And then when you're not in the chamber, this is called the hyperbaric paradox. When you're not in the chamber, the body perceives a relative hypoxia, and so it induces survival responses and survival response, which is really fight or flight survival response is very different from regeneration response. So while you're in the chamber, you're inducing regeneration, and when you're out of the chamber, you're inducing survival.

[\(06:07\)](#):

So it's an amazing technique.

Dave Asprey [\(06:10\)](#):

So you go in and out.

Dr. Allen Meglin [\(06:11\)](#):

Yeah.

Dave Asprey [\(06:12\)](#):

Now, Oxy Health has soft chambers, and I've had one of those for many years now. I have their hard chamber, and some people go to a clinic and some clinics have metal chambers that go to 2.4 atmospheres. Some clinics have zip in chambers, and some people just buy those zip in chambers from Oxy Health themselves. What's the difference in use case for those? I mean, do I have to find a clinic with the big metal ones or is the soft one going to be good enough?

Dr. Allen Meglin [\(06:38\)](#):

That is a great question. I could tell you that we're still developing the science, but what we know so far, and this is largely the work of Paul Harsh in Louisiana, what we know so far is that various treatments have their own dosage protocols for optimization.

[\(06:57\)](#):

So that as an example, if you're talking about concussion or brain injury, you don't want the highest pressure you can get. More is not necessarily better. What in fact you do want, the optimal pressure seems to be at about 1.5 atmospheres. And so if you're dealing with brain injury or even brain protection or dementia reversal, a soft chamber that goes to 1.3 atmospheres is more than adequate and in fact preferred to a hard chamber on the other end of the spectrum. On the other end of the spectrum, if you're trying to heal a wound like a diabetic foot and you just can't get that wound to heal any other way, you treat them with very high pressures like 2.2, 2.4 a TA, and it drives healing. So there's a dose response curve, which I believe is related to which genes you're activating in the genome.

[\(07:50\)](#):

So it's like any other drug dose response.

Dave Asprey [\(07:53\)](#):

I love that answer. It's the same thing with psychedelics, right? There's microdosing and then there's hero's journey. They're just not the same thing, and they have different responses with Oxy Health. It's pretty fun though because you can come to the biohacking conference and they'll have hard chambers and soft chambers there. If you saw my documentary on healing faster than you're supposed to after surgery, I was doing the hard sided Oxy Health Chamber as part of my healing protocol, and I healed twice as fast as you're supposed to after a bone surgery. So it's possible to accelerate healing. We know this can be done and it's just a question of having access to the technologies. So why don't you come to the Biohacking Conference, check out Oxy Health, and I appreciate Oxy Health sponsoring the conference. They're one of the big companies in the biohacking industry, and I had like to see you get in one of the chambers and give it a shot, see what it feels like.

[\(08:52\)](#):

If you've never had a session, then you can say, now I've been under 2.4 atmospheres or 1.3, and maybe you'll decide that you want to pick up an Oxy Health Chamber. Next. I'm trying to sell you one because I want you to have the benefits of hyperbaric therapy, which is why I've got a top expert in it on the show for you today because it's real. I mean, maybe there's a pharmaceutical that might do something and do something else you don't know about, but hyperbaric is something that has profound healing benefits, especially for the brain, especially for mitochondria. And I think you should know about it, and I think you should come play with it and talk to the inventors. That's what the bio hack and commerce is all about. I want you to go to oxyhealth.com to learn more about their hyperbaric chambers.

[\(09:36\)](#):

Like I said, I've used one for more than 10 years and go to biohackingconference.com to come hang out with me and more than a hundred companies in the biohacking space and epic speakers like Joe Dispenza and Dr. Daniel Amen, both of whom would be probably more than happy to talk about hyperbaric. In fact, I never said this on the air before. My first Oxy Health Chamber was one that I acquired used from Dr. Daniel Amen's clinic when they replaced it with a newer one. So there we go. That was 10 plus years ago. But I'll just tell you top brain doctors, people who are interested in meditation, they figure out that, huh, if you can fix the brain with hyperbaric, you can meditate better, you can focus better. You can be a pro athlete better. The benefits, because they're so low level in mitochondria seem to go from healing to thinking, to being, to meditating.

[\(10:35\)](#):

Does that match your clinical experience? Do people just describe more focus or more peace, more calm when they have an oxy health?

Dr. Allen Meglin [\(10:42\)](#):

Absolutely. In fact, we treat a lot of professional athletes and we treat a large number of hockey players, and they're kind of a great model for this because hockey involves a lot of high velocity collisions and it's extremely strenuous. And our players very rapidly adapted using hyperbarics in the training room and then in the stadium, and so much so that they asked me for a small chamber that they could bring on the road because in addition to healing from concussion and making return to play much faster, it restores their depleted energy sources. It helps them build mitochondrial. So the mitochondrial density goes up, it helps with mitochondrial fission and fusion and biogenesis. And so at the end of their two minute shift, they come back and they say, I got more. And they notice initially they notice a big difference between playing at home with hyperbarics and playing on the road without hyperbarics.

[\(11:50\)](#):

With hockey, it's two minutes of, go as hard as you possibly can and then get off the ice. And on the road they'd go as hard as they could, and then after two minutes, they were completely gassed. But with hyperbarics, they were ready to go. So their recovery was faster, even if it wasn't injury, it was just restoration of energy stores.

Dave Asprey [\(12:13\)](#):

It's a really interesting technology when you look at what happens when you fly. One of my primary use cases now that my brain is much better than it has been after various injuries over the years, is I get off an airplane, I come back and I like to hop in the hyperbaric, and then you recover from the flight. So when pro athletes are flying somewhere, they're already hosed from the mitochondrial effects of the flight, which isn't just high altitude. So if you have access to hyperbaric, you recover using that more quickly.

[\(12:44\)](#):

And whether you're going to be on stage giving a keynote where you need your brain to work or you're going to be on the ice and you want your muscles to work, it's the same underlying system. And I think there's a clear argument for hyperbaric in those use cases. I am a big fan and thanks for just going deep on the science and for working with Foxy Health and for being at the Biohacking Conference.

Dr. Allen Meglin ([13:05](#)):

Thanks so much.

Dave Asprey ([13:06](#)):

It's truly an honor. Well, you're a real doctor. I'm an unlicensed, so what that means is way more than I do about some stuff. It also means they can't take away my license for saying stuff that's real. So we work well together. We'll put it that way. So it's an honor to have a real doctor on the show, and thanks again.

Dr. Allen Meglin ([13:25](#)):

Thank you so much.

Dave Asprey ([13:27](#)):

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