New Developments in Stem Cells – Dr. Harry Adelson & Dr. Amy B. Killen – #909

Dave:

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Dave:

You're listening to The Human Upgrade with Dave Asprey. Today is a live interview and it's here in Park City, Utah with a couple friends who've been on the show before. It's Dr. Harry Adelson, one of the most experienced stem cell guys that you'll ever find, who's done more than 6,000 procedures, including the Full Body Stem Cell Makeover® that he did on me, or to me, with me, whatever that's called, along with Dr. Amy B Killen. And you're on the stem cell side doing aesthetics and sexual rejuvenation and things like that. So last time you heard from them, I think what, maybe the time before, I had been unconscious for a while and you had taken stem cells from all over the place and external factors and injected them in every part of my body that you can possibly do. That's a massive rejuvenate thing. I wanted to come back in because I'm here to get a refresh on my stem cell makeover and share what's happened in the last couple years with stem cells with our audience. So guys, welcome to The Human Upgrade.

Dr. Harry Adelson:

Thank you so much, Dave. So good to see you again.

Dave:

Let's assume that some people listening didn't catch the last couple episodes. So talk to me about just the very basics. One minute on stem cells, what's going on with stem cells. What are they? Because there are people who are new to the field and then other biohackers who are super experienced. We'll get into the biohacking mindset that you guys see in the people come in. So first off, just ground the audience.

Harry:

Okay. Well, stem cells exist in virtually every tissue in our body and their job is to maintain the health of their microenvironment.

Harry:

Well, stem cells exist in virtually every tissue in our body and their job is to maintain the health of their microenvironment. So whenever you have healing after injury of any sort, it's a stem cell mediated event. So these stem cells recognize that the tissue's been damaged, they launch the healing cascade, thereby giving the body the opportunity to heal. Well, when that works very well in an acute situation, but if you have what's called suboptimal healing, which is most chronic pain conditions, where either you've had one traumatic injury or multiple overuse type injuries and the actual tissue structure changes and the tissues are constantly firing pain signals, well, you're sort of left with what you're left with.

So the idea with regenerative medicine and stem cell medicine is we take stem cells from an area of your body where you still have a robust population and place them in the area of suboptimal healing, thereby tricking the body into thinking that it's been re-injured and launching the natural healing cascade, which is really why it is fits nicely with naturopathic philosophy because it's using the healing power of nature.

Dave:

I love that. The type of areas where we can get stem cells or similar to stem cells throughout the body, just give me the brief list. Where do you get stem cells inside the body to put them in the right place inside the body?

Dr. Amy B. Killen:

You can get them from your bone marrow, you can get them from your fat. Those are the most common areas. I mean, you can actually get them from all different areas. You can get them your teeth, from your urine, from [crosstalk 00:03:40].

Dave:

I use earlobe cells [crosstalk 00:03:41].

Amy:

Because they're everywhere. But there are lots of them are in your bone marrow and you're fats, so we use those quite a bit.

Dave:

All right. And what's changed in the last couple years in the stem cell industry? And just for listeners, this is going on what, 12 years of doing stem cells and 20 years of doing injections for pain. And you've been working with cells for how long?

Amy:

About eight years.

Dave:

About eight years, okay. So what's shifted? What have we seen in a lot of clinics changed and regulators and masks, and God knows what's going on in the world. So what are you guys seeing?

Harry:

Well, first talk sort of about the good news, which is the advent of this VSEL technology, V-S-E-L. V-S-E-L stands for very small embryonic like stem cells. And these are cells that exist in your blood. However, under normal circumstances, they're completely quiescent, which is another word for hibernating, they're inactive. So if you take blood and you concentrate platelet rich plasma, for instance, there's a lot of VSELs in there, but they're completely inactive.

Dave:

So it's like the US economy for the past two years, that's VSELs and nothing's happening. Okay, got it. And we're going to activate them in some way.

Harry:

I had been hearing about this VSEL technology for a number of years, but the only method that I heard about for activating them was this multiple freeze-thaw, that was very time consuming, took like 10

hours. And I just couldn't figure out how to integrate that into my day. And then one Sunday afternoon, I got a cold call from Dave Asprey-

Dave:

That's weird.

Harry:

And I answered and I said, "Hey, Dave, what's up?" And you said, "There's this guy in California, his name is Todd Ovokaitys. He's developed a new technology to activate VSELs. It's a laser technology. Let me introduce you to him." I met Dr. Todd, Amy and I both spoke with him. He came here and visited. And starting last summer, we've integrated in the VSEL technology. Along with the, we still use bone marrow, we still use fat for the time being, but we've added in this VSEL and the... Do you want to talk a little bit about the mechanism of action of the VSEL?

Amy:

Well, the idea is these VSELs are they're very youthful cells, so they're not changing as you get older. So they maintain a lot of the youthful properties, like the telomeres are still nice and long. And so we're using these cells, they're more active even than normal kind of mesenchymal stem cells and they also are very youthful. So we're taking advantage of the fact that they're more youthful and more active than some of the other cells that we have access to.

Dave:

I also like the VS part of it, the very small, because the smaller the cell, the easier it is to get into the brain and to go all over the place.

Harry:

Yeah. They're smaller than red blood cells, so they freely cross the blood brain barrier.

Dave:

So I've been interested in ways to get more varieties of stem cells that can do the right thing in the body at different places. And so I came across quite a few years ago now, there's an ultrasound way of activating them and then the freeze thaw way of activating them. We didn't even know 10 years ago that we had these very small cells in the blood. So these are newly discovered compounds.

The idea that now I can come in and what we're going to do as soon as we finish recording and probably shoot some of it for you guys too, if you really want to see my butt or something, but we're going to take cells and we're going to do a refresh on the whole body stem cell makeover. What that is every joint in my body has had cells to keep it younger, all this stuff along the spine. So we're going to go to the areas of weakness that I've had historically. I've had three surgeries on my knee. I've had a recent surgery on my toe, on my right foot, but we're going to systemically treat it and we're going to add in the VSELs this time, which is really cool. So the idea of using all three versus just using VSELs, what are the benefits that you get for doing a mix of stem cell types?

Harry:

Well, there's the theoretic benefit and then there's the benefit that we've actually observed to this point. The theoretic benefit is we talked about the VS, the very small aspect. The embryonic-like, what's

interesting about these VSELs is if you look at the hierarchy or the family tree of stem cells at the very top are the embryonic stem cells, and those are the most primitive, they have the ability to turn into anything, the problem with using them clinically, there's two problems. One is it's illegal and arguably unethical. The other is that they tend to turn into benign cancers.

Dave:

Wait, which ones are these? The-

Harry:

Embryonic.

Dave:

The embryonic ones. And no one wants those anyway, that's like a 1980s technology.

Harry:

There are some centers in the world [crosstalk 00:08:20] that do it. There's a group in Moscow that does it. And there was a big case study about somebody who had embryonic stem cells injected into their spinal canal and they grew a tumor in there, which is a really bad place to grow a tumor. So we don't really use those. But then down here, we have the mesenchymal stem cells, which are what we use from bone marrow, what we use from fat. But in the middle, looking down this hierarchy and this family tree are the embryonic-like stem cells, they're almost as primitive as embryonic cells, but they're not so primitive that they turn into cancer.

Dave:

And plus they match you. If you're getting embryonic cells, which again, almost no one on earth does, that's not what stem cells are, but if you're getting those, they don't have a match from a mitochondrial perspective and from a nuclear DNA perspective. So maybe you should get your own cells and just get the ones that act like that. It seems to me more compatible with the way I like to treat my body.

Harry:

Exactly, exactly. So that's the theoretic. And so the thing that I feel the need to say is that this is very... There's not a lot of research in VSEL. So I'm going to tell you what our experience has been so far, but we can't say with any conviction that this stuff actually does anything. Having said that, since we started using the VSEL, this last July, about six, seven months ago, the two things that we've noticed just in this short period is that when people wake up from the procedure, they have almost no post procedure pain, which before was a problem. People would [crosstalk 00:09:52].

Dave:

Oh yeah, I've done both.

Harry:

And so that's got to be a good thing. That's an interesting finding.

Dave:

It's almost like they're doing something that you can see almost every time. What do we call that clinical evidence? Is that what that's called? Is that still a thing?

Harry:

That's right. And then the other thing is that people are reporting immediate benefit, which is not typical. Normally it takes two to six months before you see any benefit. And now with the VSEL, we're seeing more, more... It's not everybody, but we're seeing more people saying, "Yeah, I just feel better right away."

Dave:

I noticed too, from putting them in the nasal canal or eyedrops, crazy improvements in vision, just over the top. So you literally can just put a drop in each eye, like, "What just happened?" So I'm a fan of maintaining eye health, which is a good thing. What do you see if you use VSELs, facially, skin, reproductive organs. Tell me the story for men. Well, because I'm interested in that, and women, because I'm also interested in women. Give me both stories.

Amy:

I think that we're similar kinds of effects of other stem cells, but we're just seeing them faster, like he mentioned. And then sometimes in some people just more improvements than we might see with other stem cells. So it was like you had PRP back in the day, which we were still using for a long time. Then you have the other types of stem cells, the bone marrow, the fat, these mesenchymal stem cells, and then you have the VSELs. In terms of which is the strongest, it seems like the further we go down, the more strength we're getting and the faster results we're getting as well. And VSELs are in your blood, so we don't have to necessarily do all the other procedures if we don't want, to get to VSELs. We're just taking blood and then we're using the special laser.

Dave:

I think for the whole body makeover, I absolutely would want my marrow and my fat because you're going go under anesthesia because it's a long procedure and everywhere on the body that you can get an injection to be stronger, it's a major upgrade. So I would want all of the benefits, all the growth factors and things. But if it's just a touch up, you could come in and you can make it easier, so faster recovery and things like that.

I've been trying to figure out, VSELs is a dumb name because everyone who hears it thinks it's V-Cell, C-E-L-L and then it's all confusing. So I'm like, "Oh, they're faster." So then what should you call them? And I go back to star wars, but the old star wars from the '80s, wherever it was. And they had turbo lasers. Now anyone who's an engineer knows that turbo is the thing you put on a gas engine and you don't need a gas engine on your laser. So turbo laser is a dumb idea, but I still want to call it turbo laser anyway, just because it sounds cool.

Amy:

Turbo cells?

Dave:

Yeah, yeah. Turbo cells too. [crosstalk 00:12:26] But VSEL, we got to find a name. Super turbo upgrade, whole body stem cell makeover supreme.

Amy:

It's a lot of adjectives.

Dave:

I think that, and if it's spelled something cool. Like you will rock, then if we can just work that out, I think we can do that.

Amy:

All right. You're on it.

Dave:

Okay. Now let's talk a little bit about what the industry has done in the past, maybe three, four years because there's constant changes. It's almost like instead of allowing it to evolve the way normal industries do, there's these people with black sunglasses and black suits who just come in and stir up the rules every six months to make big pharma more powerful. So what changes have happened that have been beneficial or not beneficial for the stem cell business in the last little while?

Amy:

You want to go?

Harry:

Sure. Well, the FDA put out a series of guidelines some years ago, where it was a very strange move. Nobody really understood quite why they did it this way, but they issued these guidelines saying what they considered okay and not okay. But then they said, "We're going to wait three years to actually implement them." I think it was about a year ago, they actually implemented. And the main thing that happened is pretty much the entire umbilical stem cell cord industry for the most part came to a grinding halt.

Dave:

In the US. It's still vibrant in the rest of the world. Right?

Amy:

Yes.

Dave:

But it's almost like there's less innovation in the US now for some weird reason. Who would imagine? All right. So in the US, we're not doing umbilical cells. What was the downside of umbilical cells?

Harry:

Well, the downside was there were actually people not doing a good job.

Dave:

All right. So in the US, we're not doing umbilical cells. What was the downside of umbilical cells?

Harry:

Well, the downside was there were actually people not doing a good job. So there were laboratories providing these umbilical stem cells that may not have even been alive or in some cases were contaminated. So that was sort of the silver lining of this whole thing is there were people out there who should not have been doing what they were doing.

Dave:

Thanks for saying that. Umbilical cells have always scared the crap out of me. And it's because what did the mother you got them from have, okay, that's one set of things. And what was her lifestyle? Were they healthier cells or not, and all that. Then you have genetics and whatever else that might be in there that shouldn't be in there, but then you go, "What did they test for to make sure they're clean?" If this is the universe of things that we know you might have, this is the universe of things you might actually have that we don't even know about yet, some slow growing virus or whatever. And then this is the amount they test for. And then, oh, after you get through all that, maybe you got cells from only eight women that you're getting injected with, who... And everything was clean. And then you go, oh, were they treated properly and are they still alive?

So at that point, that's not say you can't get good umbilical cells, but every step has to be done with precision and integrity. It's really hard and it's a complex supply chain. Like I went to the discount stem cell clinic over the border or something, I would not feel comfortable personally with those, but I do know that there are some overseas in Switzerland or somewhere where they're probably doing a really good job. I'm just concerned about all the steps versus my own cells. Maybe they're a little bit older. Well, we'll just make them younger, we'll get some VSELs and laser them and I'm going to eat a radioactive spider later, whatever. We can do that and then it's compatible. If it's infected with some weird virus, I'm already infected. I consider that to be much safer. Am I out of a line?

Harry:

Well, that's why we like autologous tissues. Autologous meaning donor and recipient are the same person. We like using your own stuff because then there's really no question.

Dave:

It's cool too, because even guys like my friend, David Sinclair, been on the show a couple times and Steve Horvath, who did the Horvath clock for cell aging, and I talked to you about that on a couple of things. I just spent a couple days with them. What they're doing is they're saying, "We can measure cell age and we can biologically reverse it." And even in Super Human I wrote about some guys in Japan who are taking cells and reverse aging them stem cells and making them pluripotent. So why do I need to get this from an umbilical cord when I'm pretty sure we can take this and say, "You cell, I want you to look like this and act like this and do this." We can do that and it's kind of cool because it hasn't happened before.

Amy:

Coming soon.

Dave:

Yeah. Okay. All right. I have a question and I want to start here, of all the treatments you've done for any one patient, what was the most miraculous, crazy, unexpected benefit that you found?

Amy:

My favorite patients are actually men who have erectile dysfunction and if it's pretty severe-

Dave:

So like me?

Amy:

... so I could turn it around. Because it's life changing. If you have really severe dysfunction that's been going on for years, it's affecting your social life and your relationship as well as just your confidence and all of those things, doctors have told you there's no hope for you. To be able to occasionally actually turn back the clock on that and give people function back, it's pretty amazing.

Dave:

That is really life-affirming if someone's in that situation. To be really clear, the treatments with that, that involves injecting what kind of cells into the penis?

Amy:

In the past, I've done it with stem cells from bone marrow or from fat, I've used PRP, more recently VSELs. But some of my first cases where I was most just first blown away was back when I was just using basic bone marrow or fat stem cells [crosstalk 00:18:18] patient.

Dave:

There was a time you injected me and you're like, "This guy totally doesn't need it, but I'll just give it to him [crosstalk 00:18:33]."

Amy:

I've so many stories about you.

Dave:

If you're new to this show, I might sound like I'm being inappropriate. Amy has been on stage making jokes about my penis with my [crosstalk 00:18:44] HIPAA permission form signed. Because she did the first injections.

Amy:

Because you were videotaping me injecting you the first time. [crosstalk 00:18:56] You were live videoing without me knowing it. So I look up and I have a needle of my hand and I have your penis in my other hand, and then there's your camera, and I was like, "Oh."

Dave:

And I had a picture of a cat over the penis, not really. I had a blanket that was there. So there's nothing you couldn't unsee if you find the whole video. But do you remember the other details in the video, what I said?

Amy:

I don't remember.

Dave:

You were probably too traumatized. So the camera's aiming down from where I'm laying on the bed thing and then the blanket's blocking views, but all you see is Amy's hands coming down with gloves on and this big needle. And as soon as it goes in my toes spread, I'm like swing, like, "Ow." Then I say something along the lines of this is going to help with end girth or something like that. And then you started laughing, which makes the needle shake. Okay, you didn't do that. But it was righteously funny and it wasn't painful. So every guy listening just crossed their legs right now. There's lidocaine, okay?

Amy:

Yeah, it was topical numbing cream. [crosstalk 00:19:56]

Dave:

Can't feel anything.

Amy:

[crosstalk 00:19:56] If you're here, we just put you to sleep usually.

Dave:

Yeah. You did it again during the six hands, whole body stem cell make over and that was non traumatic at all, but it's not as big a deal as it sounds like. And then you followed up with some other shock wave kind of stuff.

Amy:

[crosstalk 00:20:11] Yep.

Dave:

Now the reason that you would do this, even if you don't have ED, is that it actually grows new blood vessels and new nerves.

Amy:

It does.

Dave:

What could go wrong with having more blood vessels and more nerves in a sensory organ that needs blood vessels to function? It's almost like it gets bigger.

Amy:

It's a good preventative strategy to do once every so often.

Dave:

To prevent erections?

Amy:

No, no, no, no. To prevent non erections.

Dave:

All right.

Amy:

Oh goodness.

Dave:

Did I make you blush?

Amy:

Did you? It's possible.

Dave:

That's not supposed to be possible. So we talked about the guy side of things and you're doing VSELs with that now, but there's also the woman side of things. Talk to me about what you do with vaginas. Where do you inject? What results do you see? Who should get that kind of the stuff? Because that's part of the stem cell makeover. So you come in like, "Oh, you're going to make my face look better, make my spine better, everything. Oh, you might as well take care of my lady parts."

Amy:

Might as well, yes. [crosstalk 00:21:11].

Dave:

What happens in there?

Amy:

Usually I'll inject the clitoris and I'll inject the anterior vaginal wall where the G-spot is. Usually it's a few injections inside.

Dave:

And it's numbed too, so-

Amy:

It's numbed, yeah. Numb, same thing, topical numbing cream, not painful or you're asleep. Super easy, super-fast and really no downtime for many of these injections. And people report increasing sensation.

Dave:

No downtime as in?

Amy:

No downtime, as in you're able to get up and go exercise and go... Normal activities.

Dave:

And it's usually one or two days before sex?

Amy:

You can usually have sex right away if you want to for both men and women. As long as you're not hurting, then that's fine. But we have increased blood flow, same kind of thing that we see with men. We see improvement of sensation, improvement in orgasm, sometimes improvement in stress urinary incontinence symptoms.

Dave:

I've heard several women friends who have kids mention that after being treated, they're like, "Oh my God, I don't sneeze pee anymore. That's good."

Amy:

Exactly. Yeah, it's nice. You can get a trampoline and you can jump on it too. So that's what we do.

Dave:

Okay. That's really cool. From a male perspective, having experienced a vagina pre and post, I don't think it was the same vagina. It was a very big difference, just to not be too crass on things. But the amount of rejuvenation within three or four days was just unimaginable.

Amy:

That's awesome.

Dave:

I'm a fan of that. I think doing it when you're getting a whole systems upgrade is something you should just do. So let's talk about the kind of person that comes in for a whole system upgrade versus like, "Oh, I just wanted more erections," or, "I just wanted my face to look pretty or something." Maybe Harry, you want to start with this? Because both of you, half what you do is makeovers?

Harry:

Let me just quickly remind people what Full Body Stem Cell Makeover® is and how it came to be. So when I started doing stem cells back in 2010, very few people in the United States were doing it. There was really just a small handful of people. And so I was traveling to south America to learn from the maestros, from the people who had been doing it the longest. And that was partially because I needed to learn from mentors and there weren't any here. And the other was, my practice was very slow here because no one had heard of stem cells. This was back in 2010, 2011. So I would go spend a month in south America, then I'd come back here.

And my practice here, interestingly was all ranchers, Wyoming cowboys. The reason for that is because the earliest adopters of bone marrow stem cells were veterinarians, and here are these people who own these expensive work animals, these expensive horses who are getting old and have various injuries and they want them to keep working for a couple years. So they would take them to this guy and he would do bone marrow stem cells on the horses and they would see with their own eyes how well it

worked. The horses went from not being able to work and now they could work. So these guys would say to the vet, "Well, can't you just do my low back and my neck?" And the guy would say, "Well, no, I can't because I'm a veterinarian, but there's a guy in Park City doing it now, you can go to him." And so in those early years I was getting these busted up ranchers who had worked their entire lives-

Dave:

Like, "What's Yellowstone?" And like, "That bull hit that guy way too many times," right?

Harry:

I mean, these are guys who just never take a day off. They've worked hard their entire lives and they literally have arthritis throughout their entire bodies. So I started doing the... And to your question on mindset, these are very pragmatic people.

Dave:

Ranchers are cool. I grew up in New Mexico and-

Harry:

They're very pragmatic people. They're interested in what works and they consider their body a piece of... If you have a piece of farm equipment that breaks down, if the warranty covers it, great. But if it doesn't, you're still going to get it fixed because you need it in order to function. And that's how they feel about their bodies.

Dave:

And they don't whine to you either. They're pretty tough. They probably wait too long to come in. Right?

Harry:

Yeah. There's no victim stuff going on with these guys. You don't have to worry about that. The hardest part is to get them to tell me what hurts because I'll ask them, "So tell me about your pain." And they'll downplay it. I'm like, "No, I want you to complain to me."

Dave:

I love that.

Harry:

Yeah. So anyway, I started doing these huge treatments because they'd say, "Do my back and my lower back and my neck and both hips and both shoulders and both knees." [crosstalk 00:25:34]

Dave:

Overall, my tractor.

Harry:

And so just completely jokingly, I called it a Full Body Stem Cell Makeover® , really tongue and cheek. Well then on leap year, February 29th, 2016, [crosstalk 00:25:47] was the first time that you came in, Amy and I treated you. And then we started getting these biohackers. And these were people who don't

necessarily have widespread systemic arthritis, but neither do they ever want to get there. These are people who want to live to at least a 100, if not beyond and be active the entire time. And I started getting people saying, "Well, can't you just do my whole body in one sitting?" And I thought, "Yeah, actually, why not?" And then I asked Amy, I said, "Amy, what would you think if we just basically did every single injection that we know how to do all at once?" I'm from the Mick Jagger school of anything worth doing is worth overdoing. And that was what... When did we do yours? I mean, it's been-

Dave:

It's been a while.

Harry:

It's been like four, four and a half years since we've been doing it.

Dave:

I remember you wanted to say, "Well, you can come in twice and we'll do lower half an upper half." And I'm like, "Harry, F that. I'm going to have to fly to Park City. Just do me good, everything." And we talked about it and you brought in the whole team. Who does it? Is this more men, more women? What's the balance of-

Harry:

It's evenly split. So people can come in. They come in the day before, the morning of the procedure, they meet with me and Amy, they meet with anesthesia, they meet with my nurse. It's a bit of a commitment. It's a time commitment, it's a money commitment, it's an energetic commitment. Anesthesia puts them to sleep. The whole procedure takes about three hours. I inject stem cells, bone marrow stem cells, fat stem cells, VSELs into the entire length of the spine. Both shoulders, both elbows, both wrists and thumbs, both hips, both knees, both ankles and great toe. And while I'm doing that-

Amy:

I do the [inaudible], the face, the neck, the décolleté, and then the sexual organs.

Dave:

Décolleté. Is that how you say that?

Amy:

Décolleté, yeah.

Dave:

Why is the décolleté different in men and women? Oh, aside from obviously boobs, but that's not what I'm talking about. The skin is different.

Amy:

The women tend to wear lower shirts and dresses and they get more sun damage. So a lot of-

Dave:

That's the only difference?

Amy:

Well, that's the main difference.

Dave:

I thought there was a different skin tissue type, that it was thinner or different up here in women.

Amy:

It's more just the way that it's exposed to the sun and to... And women just care more about. Men don't tend to show their chest. [crosstalk 00:28:02]

Dave:

So it's a cleavage issue, pretty much.

Amy:

It's cleavage and... Yes.

Dave:

I swear I read some-

Amy:

I mean, it might be, could be true. I don't know about that.

Dave:

Somebody somewhere told me that there was a hormonal difference in the skin on the chest for women.

Amy:

I don't know.

Dave:

Because you have to hold babies there, maybe it's more friction resistant or something. It was supposed to be softer and thin on women than men, otherwise if your elbow and mine, yours would still be thinner because-

Amy:

That's possible. That's possible.

Dave:

All right. I'm going to have to find the study. I'm really curious now. Because you're going to know because you know everything about skin. All right. Let's talk about skin. So what can you do to my face to make me look like a teenager? I mean, more like a teenager.

Amy:

So we'll do injections, which I do look at the skin and just areas of thinning skin or areas of volume loss, injecting the stem cells and the VSELs and all those things. And then I'll use microneedling as well afterwards. These things are helpful for improving the skin tone and texture and fine lines and making your skin just more youthful appearing. These things don't help as much for loss of volume. Like when you lose volume in our cheeks and you put filler or something in your cheeks, that's an immediate sort of filling of your face.

Stem cells are not as good at filling. So they work well also with other things, lasers or fillers or things like that, if people want to do that. But a lot of our patients really want to stay natural and they don't want to put other things in their skin. So in those cases that this is really great just for making your skin actually be more youthful because you're increasing collagen and elastin and hyaluronic acid, all the things that we start decreasing production of when we're like 25.

Dave:

I'm still stuck on the filler thing. So you can inject hyaluronic acid, which is a component of collagen, which is probably the safest filler. Right?

Amy:

It's pretty safe and you can dissolve it if it goes awry.

Dave:

So because you have a big, little baby face on this [crosstalk 00:29:55].

Amy:

Yeah, probably.

Dave:

Okay. But couldn't you inject calcium hydroxyapatite as a scaffolding to actually grow collagen in there, because like-

Amy:

Some of the fillers are actually calcium scaffolding type filler Radiesse [crosstalk 00:30:08].

Dave:

And then if you did that with cells, wouldn't you then grow collagen and other tissue stuff on there?

Amy:

Yeah. There's actually a lot of research looking into using exosomes, our stem cells and in conjunction with some of those types of things, or in conjunction with either this calcium scaffoldings or with lasers or with basically combining different types of modalities to get you even better results.

Dave:

Got it. I feel like we're right on the cusp of just saying we don't really need fillers. You might inject something maybe probably with cells that causes your body just, "Oh, I lost some tissue there. Maybe I should grow it back," and then you just grow it back. So you have this little pink kid cheeks.

Amy:

Yeah. Sounds good.

Dave:

How long until we get that?

Amy:

I mean probably several years before it's marketable, [crosstalk 00:30:53].

Dave:

But like five years, you think it's going to happen?

Amy:

Yeah, I think five years.

Dave:

And guys think about this, the amount of change that's happened in the last 10 years versus the next five years, it's getting exponential for stem cells, it really is. You're really on the cutting edge because you're doing the different types and all the growth factors. So I see innovation happening everywhere. You just added the lasers, which is I think a really cool addition. What do you do to evolve both of your practices so to stay on the very cutting edge? How do you know what's good? How do you know what's bad? Where do you learn?

Amy:

I think a lot of it's just networking and meeting people and going to conferences and events. In this world, there's not one single source of information, so it's about who you meet.

Harry:

Yeah. I would say I've just trained myself to never call myself an expert. I try to maintain a beginner's mind. I can learn from people who've been doing stem cell therapy for a shorter period of time. I mean, I was one of the early guys doing it, but there's plenty of people out there doing fantastic stuff that I can learn from. This Full Body Stem Cell Makeover® , for instant, if you look at it looks wildly complicated.

Dave:

Let's talk about that just for a second. Most people listening will be like, "Oh, I got cells," but needle placement is an art and a science it's really hard to get right. And that's something that I don't think we've ever discussed on the show. So we have to talk about that. Maybe finish your point, but don't forget needle placement, you got to explain.

Harry:

Well, just to finish the point is just that despite... Oh, so to watch this very complicated procedure looks so complex, but I can tell you every single maneuver who I learned it from. There's really nothing that I've devised myself, I've just learned from all these different people from all these south American countries and north American countries. I've spent a lot of time traveling, learning from different people, creating this melt of the best things that I learned. In this country, we're so enamored with the concept of best practice, that there's one right way to do things.

Dave:

It's clearly bullshit given that patients are different. Well, I think so.

Harry:

Well, that was the thing that I saw when I was seeing these different clinics in south America was one clinic was very primitive and simple and inexpensive. And the other clinic was very complex and gold standard, everything. They were both getting good results. The difference was the type of people they were attracting. So when I saw that, that's when I said, "I'm just going to do what I want done to me, and then I'm going to attract people who think the way I do."

Dave:

Imagine if that was the Hippocratic Oath. Only do to people what you'd be willing do to yourself or your dad, right?

Harry:

That's right.

Dave:

At that point, it's a different thing versus first do no harm because that's actually garbage on its face. Safety's your first priority, you should hide in your house wearing 17 masks and see what happens forever. Clearly safety was your first priority, breathing might have been your first priority. So I believe that what I do this to myself and making something that is clearly within all the standards of care, but it also recognizes when someone comes in and says, "I want to be one of those ancient cultures who would tend to their forests by having animals go through and eat stuff and maybe light fires to burn a little bit of debris so that they would have a park," and you can choose that. Or, "I want to be one of those people just wait till I smell a smoke and I send helicopters in with big drums of chemicals to try and put out a fire because I didn't take care of my forest." So I think the mindset that you've got there is much more, let's just be preventative and let's make this work better. Let's go back to needle placement though.

Harry:

Oh, needle placement, right.

Dave:

So we're talking about limbic things. What's the difference if you're off by two millimeters?

Harry:

Well, it's the difference between being inside a joint or outside a joint. If you're putting it inside the joint, it needs to be inside the joint. Same with intervertebral discs. Intervertebral discs are one of the only tissues in the body that do not contain any blood vessels. So if it's not in the disc, it's not going to get in the disc. There's no hand grenades here, it needs to be precise.

So this behind us is what's called a C-arm. It's a motion x-ray that we use for needle placement and behind that there's an ultrasound machine. So the nice thing about the x-ray is you can see the bones, you can see the placement of the needle. We use a little bit of iodine contrast so you can verify that the fluid is going into the tissue that you want it to go in. That works great for joints and spine and epidurals and intervertebral discs, but for rotator cuffs and Achilles tendons and that sort of thing, then that's when we use the ultrasound. So having the two together really is the one, two punch. So if you're looking for a place, if you're considering having stem cells done, you want to make sure that they do either one or the other or preferably both.

Dave:

Honestly, it's a big procedure. I kind of believe if I'm going to get surgery done, I'm like, "How many professional athletes have you done surgery on?" That would be one of my qualifying questions. And then if you're going to do stem cells, how experienced are you? Because having the gear doesn't mean you know how to place the needle. So my vetting of you, I don't know if I ever even told you this, so I remember one is a Karolinska Institute trained medical doctor, full MD, ER doctor, all that kind of stuff. So she came in for my first treatment and afterwards she's like, "His needle placement was just top notch." So she came in and was inspecting your work. So you received high marks.

Harry:

Well, to be perfectly honest, I usually turn professional athletes away because there's such monumental pains in the ass, but I will tell you the greatest sort of compliment-

Dave:

[crosstalk 00:37:05] Whiny bitches.

Harry:

Very difficult. You got to talk to their surgeon and you got to talk to their trainer and you got to talk to-

Dave:

It's true, they [crosstalk 00:37:11].

Harry:

But the one thing, and I don't think I've told you this yet, Dave, is over the last couple of years, a referral source for me has been the Navy SEALs. [crosstalk 00:37:22] I've gotten a number of those guys in and they come in and I say, "How did you find me?" And they said, "Oh, well, I went as far as I could and they couldn't help me. And they handed me a list with three names. You were first on the list and here I am." And then I get a check from United States government, special forces command, SCOM, I think, it spells special forces command or something. And that's not something that I can... These guys, their identities are top secret. So it's not like I can whip out my phone and say, "Hey, can we do a little video?" And they're like, "No."

Dave:

Do they show up and repel down from helicopter? Because I'm picturing that right now.

Harry:

Yeah. No, but that's been a huge honor to be able to work with these guys. Mostly it's gunshot wounds, which is not something we deal with, but just doing the fluid hydro dissection with ultrasound guidance, putting the stem cells along the nerves that are firing the pain signals, the entrapped nerves has been very helpful.

Dave:

That is one of the fundamental things. In fact, I just interviewed Tony Robbins and Peter Diamandis about their new book, Life Force, the big anti-aging book, which has just great info in it. And they talk about hydro dissection, which is also something I've talked about I think in Super Human. Can you define in a little bit more detail what it is, how it works and why? Because I think this is a new part of biohacking that the audience needs to know about.

Harry:

Sure.

Dave:

Do it.

Harry:

So fluid hydro dissection is a technique where you take the ultrasound camera, you visualize the nerve in the field and then you place a needle right next to it, not into the nerve, but just next to it and inject whether it's exosomes, whether it's VSEL, whatever sort of regenerative agents you're injecting. The concept is that pain generation can occur when those nerves are fibrotic and entrapped in the tissue because nerves should normally freely flow through tissues through the different fascial layers. When they get adhered and they're not able to pass freely, that fires pain signals. Now, I will say something about hydro dissection is performing it is in incredibly gratifying to do and it looks bitchin. Anybody can look at it and go, "Wow, that is so cool."

Dave:

It feels so different when you get it done too. And you're watching it and all of a sudden this nerve, it's all squished like a layer, just like sedimentary rock and all of a sudden it just floats free and you're like, "Ah."

Harry:

When the nerve is actually adhered, it can be amazingly curative. However, there's other causes of pain. The one pitfall as I see some docs, that becomes a 100% of what they do and now they have a hammer and they're looking for nails. So I think it's a really nice tool to have in your toolbox, but it is not a Swiss Army knife.

Dave:

It's not. Anytime someone says one thing is going to do everything, they're totally wrong, except for coffee. I mean, it's just [crosstalk 00:40:29]. So it's a system and like, "Oh, what's the most important thing for maintaining your car?" Well, clearly it's windshield washer fluid or is it changing the tires? There can't be one. So I get a little frustrated because you'll see inventors or specialists sometimes, this will fix everything. I've had some people on the show who are like that and it's neat because they know everything about their tool and it's the best knowledge, they go deep all the way through. Like there's a guy in a while ago and I'm blanking on his name, progesterone. Progesterone has all kinds of anti-inflammatory effects when use it locally. And he's like, "Migraines, progesterone. Headaches, progesterone. Colds, progesterone. Broken bones, progesterone." You're like, "Hold on, the broken bone one?" But his point was, this has broad spectrum appeal and the more foundational you can get is good.

But to your point, I think anyone with chronic pain and movement disorders, you might want to see a functional movement guy. And then you might want to do hydro dissection and probably while you're there you should get some cells put in because you're doing the repair work and you layer these things on with an openness to say, "Oh, maybe I need meditation as well."

Harry:

Yeah. Stem cell therapy is not frontline therapy for low back pain. The question you asked Amy earlier is some of the most spectacular improvements that you've seen. For me it's been dehydrated discs, desiccated discs. And these are people who they're frequently young men, midline pain, worse bending forward, frequently it's deadlifting injuries, doing the deadlift movement with not quite perfect technique.

And if you look at their MRI, you can see the white disc, the white disc, the white disc. The white means it has hydration and it has fluid in there. And then there's a black disc and that's right where they point at their pain. This is something that all the alternative stuff doesn't help. The only conventional option is fusion or disc replacement. Well, which is much less frequently done. So these are people, young guys who are looking at having their spines fused. That's why it's so rewarding to put stem cells in there. Because one, it tends to work, not with everybody, but with most cases it works. And two, the options, both conventional and alternative are dismal.

Dave:

So these spinal things that would be a big problem for life, what's a typical age? It seems like you have all ages, especially in the preventative younger, but what's the youngest that people typically come in and what's the oldest?

Amy:

I feel like we see people from mid 30s to 80, all different ages. A lot in that sort of 40s, 50s, 60s range, but really pretty spaced out.

Dave:

And if you have a severe injury, mid 20s-

Harry:

For now I see younger people.

Dave:

I would've loved to see you in my 20s because I was trashed already, multiple surgeries and all [crosstalk 00:43:17].

Harry:

Last week we treated a 16 year old because she had avascular necrosis in her hip. But mostly it's 30s, 40s, 50s, 60s.

Dave:

I've been seeing way more necrotic bone like femur and hip things in young kids than ever before in my life.

Harry:

Well, this girl has a bleeding disorder on top of it, so she had a severe traumatic injury coupled with a bleeding disorder that was not properly managed. When you were asking about the mindset of people who come in here, there's a category of people who simply don't trust the system. Well, and then the other category are people who aren't necessarily so cynical, but they recognize that the whole concept of evidence based medicine, for one, it takes decades to get there. So just because something has not been proven to be effective does not mean it's been proven to be ineffective, it just means we're still in the waiting mode. In the cases of these young men with the severe low back pain, many of them are people who understand that this is an unproven therapy, but they're also miserable and want to get on with their lives. They've seen, spoken to friends who've had it done or something like that, and they're okay doing something that is so-called unproven.

Dave:

Let's talk about the other part of being a doctor that people don't talk about. Physician heal thyself. So how often do you do stem cells? Have you had a whole body makeover?

Amy:

I have not had a whole body, but he has. I do do IV. I'll do IV injections a few times a year if I can. And then I'll treat my own face, the parts that I can get to.

Dave:

So mid-back is not a [crosstalk 00:45:06]?

Amy:

Yeah, mid back is not, sexual organ is not. Face I can do. And I do that maybe once or twice a year.

Dave:

Okay. And that's laser and injectable micro needling kind of stuff?

Amy:

Yeah. Kind of the combination of those.

Dave:

That's kind of hardcore. I've injected all sorts of parts of my body, but micro needling with a gun on my own face in a mirror, I'd be like-

Amy:

Micro needling is easy, this injections on your own face with an actual needle-

Dave:

I don't think that would bother me. I've injected all sorts of weird places.

Amy:

... that's a little bit more intense. But yeah, it's doable.

Dave:

But those are like insulin syringes, right? They're very small?

Amy:

No, no. The needle's like this long.

Dave:

Oh, okay. Got it. But I've injected insulin. Insulin syringes around my eyes, like peptides and stuff.

Amy:

So I'll do that. I like to experiment. I feel like whatever I do for patients, I always want to try it on myself first.

Dave:

I really like that. In fact, that's in my mind a sign quality for most professions. But if you're a male OB GYN, okay, you're screwed. And if you're a shoulder surgeon and your shoulders are good, you just don't need to. But for regenerative stuff, I remember Dr. Nicotine from Vanderbilt University and I apologize, I'm blanking. Andrew something or another. The guy who figured out that pharmaceutically, purified, nicotine, not tobacco, but nicotine reverses Alzheimer's disease in 1986 and has published papers on it for 30 years. I'm like, "So are you using a nicotine patch? How do you take it?" He's like, "Oh, I've never tried it." And I'm like, "No!"

Amy:

What?

Dave:

Yeah. But it's academic purity. I feel like if you're going to use a laser on someone, you're like, "Well, what happens if I do it right there?" So you can connect, right?

Amy:

Yeah.

Dave:

And same thing with stem cells because you've done the whole body procedure.

Harry:

Yeah. I had an associate for a while that I trained up to the point for him to be able to do a Full Body Stem Cell Makeover® . And I was his first one. I was his only one because then after that he demanded that I double his salary, so that was the end of our relationship. But-

Dave:

There's a lot of that.

Harry:

Yeah. It was puzzling. But anyway, we were talking about the types of people who come in for Full Body Stem Cell Makeover® and it's roughly 50/50 men and women. And of those about half are people who have multiple pain complaints, the busted up ranchers. And while we're here, we may as well do the whole thing.

The other category is more like me. I actually went into it, I was more like the biohackers. I went into it in pretty good shape, not much pain going on, but I wanted to experience it and I wanted it for potential future prevention. My experience because with the people with lots of pain, it's obvious, they have lots of pain and then they have less pain. Well, it's a little more subtle when you go into it without a lot of pain. What I noticed is I just feel much more pliable and I'm more energetic, just everything feels better. I feel younger.

Dave:

It's so hard to put words to it. I really like how you explain that. One experience having had it that supports what you're saying, I had a chance to do this weird Russian shamanic lineage body work. And I totally appreciate Russia as biohackers, just the way of thinking there is like, "We will modify the body." They're just down with that. So you go in, these guys take like drum sticks and they stick them under your muscles. And you're like, "Ah!" "Be quiet." They just hold you down.

And so they're doing that. And then they walk on you and then they brought in people from remote villages and all, it was actually really cool. Dan Sikes is a guy who did that. And afterwards, this girl broke in, she goes, "I do not understand. His body like sand." And it was because I didn't have a lot of adhesions because my tissue was way softer than it should be for a person my age. And as someone who'd worked on thousands of people, it's like, "I'm looking for these places that it stuck and it wasn't stuck." I think the stem cell makeover that you did was a part of that for real. So it was so weird, it confused him.

At the end of this, they take a bull whip. And this is not the kind of whip that you would use in the old west, it's like a super heavy weapon of war that if you hit someone with it would break their arm. So they coil it over. And then after they do their body work, they hit you with it, which kind of hurts, but it's to make your fascia tighten up so that it holds the new positions they did. And afterwards, as a gift, they gave me the whip. So I have it hanging on the wall and people think the weirdest things in my office. I'm like, "No, it's a tool of healing from Siberia, really."

Amy:

Yeah, right.

Dave:

Right. But their observation there, that feeling looser and younger, I think that was an evidence point. Oh, did I say evidence? So yeah, that was an evidence point that there was something biologically deep in the tissues that shifted from the stem cell makeover.

Amy:

That's awesome.

Dave:

Yeah. So I haven't told that story I don't think ever, but it's kind of funny. People do laugh about the whip. [crosstalk 00:49:55] Well, is there anything else that you feel like people haven't learned about stem cells or particularly the makeover? What are the things that you wish everyone understood about stem cells?

Harry:

We have lots of information on the website, docereclinics.com. We have a number of videos. We have the Nick Nanton film on our practice.

Dave:

That's also at the same, docere, D-O-C-E-R-E clinics.com.

Harry:

docereclinics.com. On the homepage there's a free download of my e-book, which tells the whole story, tells a lot about going into great detail about my adventures in south America and the different doctors I visited and the clinics I saw. Also some of my own personal health tribulations and how that launched the Tithing Program. And I suppose I'll just mention the Tithing Program.

Dave:

Yeah. In fact, I skipped over that. You're talking about military guys and things like that. So walk through tithing. I think you're the only guy who does it. I wish it was more common.

Harry:

Yeah. So back in 2016, I lost the ability to speak and I was rushed to the hospital and I was having these strokes and we couldn't figure out why. It took about three days to get a diagnosis. And I had a bacterial infection of my heart that was causing the strokes. And the surgeon came in, he said, "Well, the good news is we figured out why you keep having strokes. The bad news is you have a totally destroyed aortic valve. You need open heart cardiac bypass surgery in two weeks, which involves opening you up." So turned out to be from bad dental work, by the way.

Dave:

Keep saying that on the show, people don't know how important their gums are.

Harry:

From capitations from having my wisdom teeth removed. So anyway, during that experience, I'm always looking for what's the silver lining, what's the lesson here. What it was is I had the opportunity to experience pain that was a 10 on a scale of one to 10, which I'd never experienced before. It didn't feel like a gift at the time, but-

Dave:

It never does.

Harry:

... what I realized after is that no matter how great an advancement is in medicine, if someone can't afford, it's worthless. So that's when we launched the Tithing Program and the Tithing Program is one day per month, we do procedures for the medically underserved. So first people have to demonstrate that they're living below poverty level. We just look at your taxes. And then there's two pathways for enrollment. One is combat service veterans. If you've served this country in combat, I'll do it for free, no further questions, I'm happy to do it. The other pathway for people who are not combat service veterans is I'll do it in exchange for community service hours. And we're doing one tomorrow. A guy did 120 hours at Habitat for Humanity. We're going to do a big spine treatment on him tomorrow.

It's super fun for me. It's super rewarding. I love doing it. I get to meet terrific people who I wouldn't meet otherwise. I get to help people I wouldn't get to help otherwise. And if you're a doctor and you're listening to this description, I learned about it from another doctor. She did a stage presentation on it, on her tithing model. And she said, "If you're a doctor, please rip it off."

Dave:

This is you can do probably flexible spending account, health spending account, but not insurances. Right?

Harry:

Right.

Dave:

Okay. What's the starting, very entry level I need to deal with one problem, all the way up to the most complete whole body stem cell makeover?

Harry:

Well, there's treatment from me, there's treatment from Amy, and then there's treatment from both of us. So currently for me to start, we start at about $20,000. And there's a lot of moving parts we're doing. We have anesthesia here, we have a lot of staff, we're doing bone marrow, we're doing fat, we're doing VSEL.

Dave:

When you say anesthesia, you mean you have a full on certified MD anesthesiologist with all the chemicals who comes here and is here the whole time. So you're paying a major medical professional as part of it. So that's what that means.

Harry:

That's right. Again, it's not general anesthesia, it's IV sedation, but it's still board certified.

Dave:

And you want to have someone there because when you're doing that, you need to have the best.

Harry:

Right. So we book out a half a day for you and we're just working on you. So that's if we're just doing a knee or a hip or something like that. Full Body Stem Cell Makeover® , if it's just the orthopedic part, it's 40,000. If it's me and Amy working together, it's 60,000. And then for Amy, for your procedures, if you're doing [crosstalk 00:54:26].

Amy:

I mean, my procedures start probably more like 5,000 for just a simple procedure. And then if I do all of my procedures, it's about 20.

Dave:

Okay. Got it. So that helps too. It helps to ground people in it. So here's the deal, it's expensive. Let's just say it like it is. And you do a Tithing Program, are you doing tithing as well?

Amy:

We talked about doing some cases together, but I haven't done it yet, but we probably will.

Dave:

Got it. And then just over time, and it might be over a very long period of time, I expect that what you're doing will become the standard of care. You're the pioneers. And if you want to go see the best people on earth and you want to be one of the first people to get it, it's always like that. That's how it is in tech, with the fastest computer and all. Okay, that's how it is. But I do think that the knowledge you're sharing on this show and with your other colleagues and all, I'm going to call them the stem cell mafia, all the people figuring this stuff out, thank you for continuing to do the work. And thank you for loading me up again with a new round of cells to sort of polish out all the work that we've done. I'm excited to get it refreshed.

Amy:

Yeah. Thank you.

Harry:

Thanks, Dave.

Dave:

Guys, D-O-C-E-R-E Clinics with an s, .com. And Dr. Harry Adelson, Dr. Amy B Killen are the guests on the show today. I will see you for the next show.