

Sauna Big Wins: Body Detox & Depression Relief– Connie Zack – #993

Dave Asprey:

You're listening to The Human Upgrade with Dave Asprey. Today, as always, I am going to tell you what you get at the start of the episode so you can say this episode is worth your time. In fact, it's way more than worth your time, otherwise, you shouldn't do it. We're going to go deep in the world of biohacking on infrared light and infrared heat. We're going to talk about how infrared light affects your body, how it triggers a bunch of different biochemical cascades.

Dave:

We're just figuring some of this out. Some of this we've known about at some levels, but now, because there's so many of us biohacking in the world, there's real university research happening. It's becoming its own industry. And this means that we can now, instead of saying something good for you, we can say, this amount of this type is good for you. And if you want an analogy, imagine if I said fat was good for you. Well, if you're like a keto bro, you'd say, "Yeah bro." Except, I didn't say what kind of fat. So some fats are good and some are bad.

Dave:

So now, if we say infrared's good for you, well, which kind of infrared does what? And that's what we're going to learn in this episode. And as you know, I bring experts in a field who have done a lot of work on the show, and that's the minimum, minimum bar. I like Connie because she always knows all the weird details about infrared and because she's built it from the ground up herself over 22 years along with her husband. So this is a leader in the industry of infrared therapy. So welcome to the show again.

Connie Zack:

Thank you so much, Dave. It's so good to see you.

Dave:

We've already talked about infrared on the show. So people may have heard you. They may have heard about Sunlighten. So this episode has to include stuff that we don't know about. So I want to go into the area of depression because so many people are anxious, they're depressed. It's almost like we might have made a societal mistake over the past couple of years that resulted in increased depression levels, at least that's what the data says. So what do we know about infrared and depression?

Connie:

Yeah. So there's some cutting edge studies that are being done right now.

Dave:

So what do we know about infrared and depression?

Connie:

Yeah. So there's some cutting edge studies that are being done right now. But first, we'll take a backup to how a lot of this came to play, which is, back in 2016, Dr. [Charles] Raison did a study trying to figure out what is causing people to be depressed, and had some theories, and found that... He used a very

expensive piece of equipment to do whole body hypothermia, which is heating the body up over extended periods of time and elevating the core temperature.

Connie:

And what he found, which is just still, every time I say it, it blows my mind because in the amount of time, one session delivered significant reduction in the signs of depression. And keep in mind, when he did this study, the people that he chose to qualify, they were severely depressed. So high, high levels of depression. And with one session, he found that by increasing their core temperature, heating the body up, that he elevated the temperature three degrees, that they were able to have significant relief in only one week. And then that lasted, that one session lasted for six weeks.

Connie:

So that was the study in 2016. And then one of his proteges, Dr. [Ashley] Mason, saw that study and the findings and decided to take the concept of that information and reapply that. And now she's doing her own studies in California. And what the great thing about what she's doing is she's doing it with a model that's very similar to our Sunlighten Solo, which is a portable chamber where your head is out because they've found that when people are immersed into heat, if they're too hot, then it's not good, and they can't stay in very long.

Connie:

And the whole benefit of infrared helping with depression is being able to slowly increase the core temperature and being able to be in there for a while. And so, Dr. Mason is doing a study that has already, protocols have already been approved with an accessible piece of equipment that people could use post results of the study, and which is super exciting, because the piece of equipment that Dr. Raison did was in Germany, No. 1. No. 2, it costs \$50,000. So cost prohibitive for people to apply back in the comfort of their own home.

Dave:

Years ago, I radically changed my metabolism because I was cold all the time. I had hypothyroid issues. And I talked to an industrial control engineer who talked about set points for our systems. And he had a protocol. It was pretty extreme. You took higher than normal doses of thyroid hormone, you wore a jacket all the time, drank hot water all day long and sat in hot saunas for a week, and you basically cooked yourself for a week as much as you could. And when you were done, your body temperature would rise. Because mine was, instead of 98.6, I was about 96.8. And right now, human body temperatures are dropping. And all sorts of bad stuff happens when you don't have the right temperature.

Dave:

But it was really expensive. I had to go to Germany, and I didn't have cancer. The safest and healthiest way to get the benefit of a rising temperature like that would be an infrared setup like the Solo one that Sunlighten makes. So if you don't have cancer, which wasn't my concern, I just wanted the biological anti-aging benefits of this, what's going to happen if you raise your body temperature with the single person head out model that you make. But give me a bullet point list of effects. But just want people to know this is a real thing. It's been going on for 20 years. This isn't new, it's just something you haven't heard about. So what are the effects.

Connie:

Exactly. So the theory is that a lot of people... And there's a lot of different conditions, not just depression. You can talk about menopause, you can talk about lots of different things where your body is unable to regulate itself. So if you are depressed, we know that people who would have depression have higher base core temperatures and they are unable to cool themselves down. So at night, their body stays elevated. Most people, their body cools down. Well, to answer your question, sitting inside or lying down in silos, for example, a Sunlighten Solo sauna chamber allows the body to unlock that regulation that's locked.

Connie:

So it opens it up and turns on the switch that now the body says, "Oh, I didn't realize that I was supposed to regulate." And so now, you go up. So we know for sure... We did a study forever ago, which now that all the science is coming out, it's so interesting because we're able to connect the dots between our studies and the other studies that are being done. We did a study measuring the body's core temperature and how much can we increase your body's core temperature in 30 minutes. And we are able to increase the body's core temperature in 30 minutes. That's something we did 20 years ago, Dave.

Dave:

Yeah.

Connie:

But now, we're able to say, "Okay. So we know we can do that. What does it do? What's the mechanism actually? What does it do to the body and what are the effects?" And the effects are that when you're able to do that, then now you're going to regulate the temperature in the body. So the body's going to allow itself to cool down. So now the people who are suffering from depression, their brain goes, "Oh, thank God. I'm cooler. Now, my body's going to be able to raise up, cool down, raise up, cool down."

Dave:

So self-regulation works better. It's like a form of exercise.

Connie:

We know there are tools to help you. And the other thing is the length of time. So if you're on medication, it can take medications a long time to make an impact on your body to relieve. But this happened within one week.

Dave:

For depression. Yeah.

Connie:

For depression specifically. Yeah. Because then it goes to, the other impact is people who have high temperatures at night don't sleep as well. Right? So now, they can have a better night's sleep and it's hard to sleep well if you're hot.

Dave:

But don't you make saunas that make you hot?

Connie:

Yes, but you're not sleeping in them, Dave.

Dave:

Okay. So it leaves the question though, because if I use my Sunlighten before bed, I see an improvement in deep sleep usually, not a decrease in deep sleep. What's going on there?

Connie:

Correct. Well, because again, you're unlocking the thermoregulation. So you're helping your body to thermoregulate. You're also getting your body into a rhythm of, okay, now this is what my brain knows. I'm doing this to unwind. I'm getting ready to pair my body. Plus you're detoxing. So let's talk about that for a second. So you're sweating and you're removing potentially toxic load, heavy stuff that's inside your body.

Connie:

When that comes out, that's going to also lighten the load, and then also help with the brain. You feel more energy as a result. Not an energy like to not be able to sleep by any means, but an energy to say, "Okay, I feel purged, I feel cleansed." And then you do need a little bit of time. I don't know. Do you go directly? I don't go directly to sleep. You do need a little bit of time in between. If you do it at night, your sauna session and sleep, how do you do it?

Dave:

I'm kind of a mutant, I guess. I can get out of the sauna, rinse off in the shower and go right to sleep.

Connie:

That's amazing.

Dave:

But I think it works because of exclusion zone water. And one of the things we haven't talked about yet is that infrared, when it hits the water in your cells, I think you mentioned at the very beginning briefly, it changes the viscosity of the water. So the water works better for making energy. And I've published a couple studies in probably Head Strong, my book about cognitive function, about how having better mitochondrial function equals better sleep quality because mitochondrial power the glymphatic system that washes out your brain.

Dave:

So you've got dropping toxins directly in the sauna because they came out through the skin, and then you've got water that works better for making ATP that's left inside the body. So when you go to sleep, that's probably better than being hot. And the shower I take is not a cold shower but it's not a very hot shower either. So that may help to return me to normal temperature. So that's a possibility.

Connie:

Yeah. No, that's something that we have talked to Dr. Michael Hamblin about, who has become a medical advisor for Sunlighten and has really helped us to understand all this new science. And he has informed us that the way infrared is being received, if you look at infrared as being the quarterback and you look at the different parts of the infrared spectrum, the near, mid and far as receivers, each receiver has a different role and takes the wavelength and makes the changes to your body. And so, with the easy water, the exclusion zone, absolutely. The infrared is being thrown, it's being absorbed by the mitochondria, and then that is converted to store more energy and definitely helping you sleep better, helping yourselves be stronger, helping your immune system. I mean, the list of benefits, it has always been crazy. What I love now is I can now go to certain elements or I can go to easy water or I can go to depression studies or I can go to some of the cardiovascular and I can go to these elements and say, "Okay. So this is why I feel like I can have so much more energy."

Connie:

It's very interesting to me that... I always have been saying forever, for 22 years, after I used my Sunlighten sauna, I am not drained. And intuitively, when I started, the only saunas that were available were the hot rock sauna. And people would always say, especially females would call and they were like, "I don't want to feel drained, I don't want to feel like I'm exhausted after I get done. I don't want to go through that experience." Well, it's not like that. With infrared, you don't feel exhausted, you don't feel drained, you actually feel more energetic and more restored.

Connie:

And now, with the easy zone and with some of the thermal regulation, with lot of these mechanism of actions, we're understanding better about how infrared works and the receptors and the different parts of the spectrum. Now it makes sense why I feel so much more energetic after I use a sauna, an infrared sauna specifically.

Dave:

Let's talk about this. I'm getting comments from The Upgrade Collective. Half of them are saying, "I get energized when I do my infrared sauna." And others are saying, "One, I get knocked out after 10 minutes." "I know that if I stand for 45 minutes to an hour that I start to get sleepy." Is there a length of time that's energizing versus sleepy?

Dave:

Is there a length of time that's energizing versus sleepy?

Connie:

There's not a length of time. I mean. Everybody's body responds differently. It also depends on, when you're using an infrared sauna, there's three different parts of the infrared spectrum. And what makes Sunlighten special is we are able to capture near infrared with LEDs, mid infrared with a specific heating element, and in far infrared separate ones. So you're getting all three ones. And each wavelength, your body responds differently to that.

Connie:

And sometimes, for example, in the near infrared, the way it works with the mitochondria, that's the energetic. So if you're getting a lot of near infrared, you probably will be more energetic than sleepy. There's this beautiful band of light that is the light from the sun without the harmful rays. But within

that band, there's three separate categories, and each category has its own receptors and its own benefits. So depending on how your receptors respond to near infrared, mid or far, and depending on the type of infrared sauna you are using, you're going to have a little bit of different experience.

Dave:

It's interesting, you could mix all three of these things but you wouldn't see any difference at all. Right? How would people know, if they're not getting a Sunlighten, whether they're getting a specific part of those wavelengths? Because most of the time, it just says either infrared sauna or far infrared sauna when you're buying something that's a generic white label thing.

Connie:

Yeah, that's a great question. Most infrared saunas are usually in the mid category based on this. So I'm going to go deep here for just a second on science. So what defines that wavelength is the surface temperature of the heater. And most infrared sauna's surface temperature, not the air temperature, I'm talking about if you were to put your hand up next to the heater, the surface temperature, most of them are not as cool and do not definitely have all three wavelengths as Sunlighten does, because we have the patent on two or more separate wavelengths.

Connie:

So there can be some that have two, but there isn't... Well, I know, we have the patent on two or more. So most are just one singular wavelength. And then within that wavelength, it's usually within the far to mid category.

Dave:

What's going on is we know now the biology knowledge, we know the physical knowledge, we're putting those two together, you took it. But talk to me about what the range of infrared that actually absorbs in water is, and why you chose a very specific number.

Connie:

Yeah. So the range as we know that transforms the body is between near and mid infrared. So in that range. So near, just to be more specific, is about seven nanometers-ish. And when I say near, it is invisible lights. So there is also some colored lights that are of a different wavelength. Near is invisible. And the right way to receive near to get the maximum absorption into the body is via LEDs, not via heat. Because you can't. It would be excessively hot and you would get such a small, small amount. Basically, it would be like the filament of a light bulb if you were to sit inside a "just near infrared" if there was any heat.

Connie:

LEDs can deliver, and we've chose... We worked back when we developed impulse... Gosh, back, I don't know, in 2008. So 14 years ago, we worked with some experts in Minnesota and Wisconsin and out east to MIT, to help us figure out the right nanometers and the right utensil measurements. Now as science is evolving, we thought it was really just in the near infrared category. But you're actually, even if a little bit of the mid, your receptors in the body can respond and make the transformations that you're talking about as far as into the exclusion zone.

Connie:

So far is a totally different. The way the body responds far infrared, which is how we started back in the basement, is, it comes into the body and it's absorbed. It actually doesn't penetrate as deep as near infrared, but it's deep as far as the absorption into the water molecules. And the water molecules, those are the receptors of far. They vibrate, they resonate, they move and that's where you get a lot of the exercising of the immune system. That's where you get the detox benefits because you're changing the water molecules and you're releasing the toxic burden through sweat. That's via far.

Dave:

So far infrared does detox. Near infrared does what?

Connie:

Energy and skin rejuvenation, anti-aging. And mid infrared is pain.

Dave:

Pain. Okay. So depending on which one you pick, you're going to get different results.

Connie:

Correct.

Dave:

And this is what I don't think people understand about infrared light. If you were to go into the sunlight, which dose of which ones would you get?

Connie:

Well, in sunlight, you're getting the entire spectrum.

Dave:

But don't you get more of some? You're getting the whole spectrum, but I'm guessing that there's a peak amplitude where you're getting more mid infrared probably. Do you know that off the top of your head? It's kind of a weird question.

Connie:

I know that greater than 50% of the rays from the sun have the infrared spectrum. And you receive more far infrared with cooler temperatures. And as you get closer to mid and near, the temperatures are hotter.

Dave:

Got it. So what's happening in the sun is that you're getting the full spectrum but you're getting UVA, UVB, which will give you a sunburn but they're actually healthy for you to get a certain amount of that. Avoiding all of those is toxic for you. And then you get infrared, which is one of the reasons you feel so good when you're in the sun. And then you get all the visible spectrum which has its own signaling stuff in there.

Connie:

And near infrared is the hottest part of the infrared spectrum. Which is why I said earlier, if you're going to sit inside a sauna, you have to convert the heat into LEDs because you couldn't sit inside a sauna with near infrared heat because it is so much hotter.

Dave:

You can add a very small amount of near infrared, like using French fry bulbs is what most people do. Like the stuff that fast food restaurants used to have.

Connie:

Yeah.

Dave:

You can still get a little bit, but it's not going to be a substantial dose. And it's maybe beneficial even. But what I don't think you want to do is you wouldn't want to do a near infrared only sauna. In fact, I don't think they even make those.

Connie:

Right.

Dave:

But you want to be able to selectively and carefully mix the three types of infrared so that you get the effect you're looking for. And that's why I've been a big fan of your work, because even going back 10 years ago, you had a little tablet built-in that says, "Okay, what did you want to get out of your infrared session?" And based on that, you go into the little Sunlighten app and say, "Okay, I want to do one that's more cardiovascular stimulating." Or, "I want one that's more detoxing." And you're changing the recipe for light.

Dave:

And that's why this is hard to explain, but why I think the Sunlighten approach is different than... I sat there and there was an emitter. Like no, I have digital control of an emitter so you can pick a recipe or a prescription to get radically different results.

Connie:

And the other thing, just to build on that, another thing we know for sure to help people who are listing is, there is a relationship between how close you are to the near end for LED. So I don't know, several years ago, we tripled the size, I don't know if you remember this, of our emitters. We made them super, super, super large inside our impulse cabin so that people could literally put their... When I sit there, I sit there with my face right up next to the emitter or I will do my knee or I will do whatever I'm looking for to receive the near infrared because it makes a huge difference how close you are to the emitter.

Dave:

Now, one of the things that I really pay a lot of attention to is Alzheimer's disease. I was a big donor to Maria Shriver's Women's Alzheimer's Movement. Twice as many women as men get Alzheimer's disease. And the reason I can care about it is I'm an anti-aging guy, and I don't want to create a world full of people who live to a 130, 140, 150 and up who can't remember their own names, because that's

not okay. And I want our elders who have developed wisdom to keep giving me wisdom. So I cultivate friendships with people who are 20 and 30 years older than I am because they save me huge amounts of time.

Dave:

And generally, I think the exchange is fair because they apparently company from people who aren't exactly their age. So this is how it's supposed to work in society. Alzheimer's stops that and it breaks the passing of wisdom. So I wrote a whole book on that, that's my Head Strong book on Alzheimer's and cognitive function and hacking your brain. So what do we know now about infrared and Alzheimer's that we didn't know before?

Connie:

We know that near infrared specifically can help the brain, going back to that switch, like if there is a type of a switch in your brain, it helps the brain regulate and change the neurons to improve the function of the brain. So what Dr. Hamblin introduced us to many, many studies that have been done with infrared, taking near infrared LEDs and putting them as helmets on the head and taking before and after pictures. And then the imaging of the brain before and after is really very impressive because it shows how before, the brain, you can see the inflammation and the lack of function, and then afterwards, after using the near infrared LEDs on the brain, a completely different healthy brain.

Connie:

So it's reducing the inflammation, it's helping, a lot of times, connect with the pituitary gland. There's lots of different theories. We're learning more and more all the time about the mechanism of action. What we know now is there is for sure a benefit. There's also benefit with Parkinson's for the same and other types of brain disorders.

Dave:

By now, people who are listening have maybe heard me talk about my very first experience with infrared in the brain. I bought an 880 nanometer emitter, a semi crazy brain hacker, put out in a Yahoo group. He maybe sold 200 of these before he disappeared them from the market. And this was a targeted tool for shining infrared into your skull and stimulating the brain.

Dave:

And for a couple of years, even when I was first starting Bulletproof, I was using this thing really regularly because it gave me my brain back. I had suffered from brain damage from mold toxins. I was recovering from that and I had this whole host of things like fibromyalgia. And I could shine this thing on my brain for one or two minutes and I'd get my brain back. I think there's great evidence for infrared light on the head. It's why any LED infrared device that you have is beneficial, but it doesn't come close to the dose or the whole body things that you get from a Sunlighten sauna. If you're sitting in a Sunlighten, you're getting the detox effects, which you don't get from LEDs at all, you're getting the brain stimulating effects we just talked about and you're getting the energy effects. So in terms of benefits per minute, I look at my Sunlighten session as like I'm stacking many, many different things just from sunlight including the recipes.

Dave:

And then I will listen to an audiobook. I've used my brain tap but I sweat on it when I'm in there. I sat in my Sunlighten during the pandemic with my son and we read the daily stoic and just had cool conversations. So it's either social time or it's biohacking time or it's meditation time. You can also do breath work when you're in it. And so I just feel like it's the most effective use of time to get all those benefits. And if you don't really want to do cardiovascular exercise, well, you can just sit in there and you get the cardiovascular stimulating benefits. Seriously, sit in your sauna and read something you love and then just go for a walk later. That's my recipe for doing stuff like that.

Connie:

Right. We know for sure, speaking of cardiovascular, because when we started the company all those years ago, the only data that was out was from Asia, and it was all on the cardiovascular system with far infrared specifically and showing the benefits of far infrared on the heart and improving the circulatory system as well as increasing circulation and changing the endothelial lining so that blood had a greater flow in the body. And then we did a study, I don't think we talked about this before, but a study in 2005, a clinical trial, double blind placebo controlled randomized study at the University of Missouri, Kansas City and showed with the far infrared, the Solo domes that now are a great option for potentially treating depression showed a significant reduction in blood pressure.

Connie:

So that's another... We talked about detox for far infrared, which is 100% really the leading one as well as immunity. But the cardiovascular benefits of having a healthy heart and lowering blood pressure, increasing circulation is also a great benefit of far infrared as well.

Dave:

Now, the Solo model that you make does all of the different frequencies, not just far, right?

Connie:

The solo is really just... I mean, it has a little bit of mid because the ranges, obviously they cross over. But it does not have near infrared.

Dave:

Okay.

Connie:

What it does have that's different than all three wavelengths we talked about, it does have your traditional light therapy as in colored lights, not lights as in the near infrared red light spectrum, but colored lights. So every Solo is equipped now with all of the different colors of the rainbow so that you can, if you do want to have... Like you said, at night, if you want to switch your lighting to red or orange or have a little bit more subdued, you can have that on the Solo that will be surround... As your head is lying out... On the Solo, your head is out, and the lights are surrounding the entry. So when you see them, they go into your brain.

Dave:

Okay. So you're getting some traditional color therapy out of it.

Connie:

Exactly.

Dave:

That makes sense. I think I'm a fan of having a full Sunlighten when possible, but if you're getting just far infrared from the Solo, it's more affordable but you're not getting the mid-range stuff like the full [inaudible 00:32:24]. I haven't tried the Solo so I didn't realize that it didn't have the mid in there, but that makes sense.

Connie:

Yeah.

Dave:

I saw that at the conference.

Connie:

But the Solo is the one that emulates what's being done in that study right now in California, because the purpose of this study is increasing the core temperature. Right? So increasing the core temperature and doing it in an accessible format that something you could do at home. So people-

Dave:

What does it cost?

Connie:

The Solo, it's under 3000. There's two elements. There's the Solo domes and then there's also a heated Sunlighten pad that's underneath. You don't have to purchase that if you don't want to. The original study that was done was just done with the domes, so you don't have to purchase that, it just gives you that complete heat all the way around you. And the pad, it does increase the cost. So you can probably get the Solo closer to 24-2500.

Dave:

Okay. So it starts at 24-2500 and up if you want to add cool stuff.

Connie:

Yes.

Dave:

But they go to sunlighten.com/dave and mention Dave, and magically, you can save a bunch of money up to \$600 depending on what they're getting. So that's the gift. Guys, you know, if someone comes on the show who has a product they make that's research based, that works for biohacking, they have to share the love with you. And so there you go. There's your discount. [Sunlighten.com/dave](https://sunlighten.com/dave), and you can save up to \$600. I've been using Sunlighten for a decade. This is a very solid company with solid research as you can tell.

Dave:

Now, I'm very interested, because when we planned what science we were going to cover before the show, you talked about chromophores. Tell me what is a chromophore?

Connie:

Yes, our team loves chromophores because... Backing up. So Dr. Hamblin is connecting us with all of the new research on light and all of the benefits. And so, my team talks in that language. Essentially, there's the cells that... Okay. Going back to the quarterback. They are the receivers that are receiving the light. And then they decide, for example, if you're going to do a short pass that is a near infrared pass, and then they take that, they store it, they convert it into energy and then that transforms the body.

Dave:

Let me zoom in on that, because I think it's important for biohacking, not just for infrared and for saunas. If you look at the cells, even bacteria, other things like this, they have specific frequency range light receptors. So they can only see a certain kind of light. So we have chromophores that can see red and ones that can see green and blue and some of those are tied to circadian timing and things like that. But we also have them for infrared even though our eyes don't see it, because our brain is like, "Ah, you don't need to worry about that. You just feel the warmth on your skin." Because seeing infrared for our species doesn't work.

Dave:

Chromophores are very important and the fact that we have them for different frequencies of infrared, that's why you can run a Sunlighten program that changes infrared, even though you don't see it, we know from a cell biology perspective that something important is happening there. And what Dr. Hamblin's study, that you're just referencing was, he was saying, "Well, okay, what does infrared do to these different chromophores? And can you summarize what he found?"

Connie:

Yeah. So he's finding that, like you said, all of the chromophores respond differently. And that what's really important is, the near infrared specifically is going to be absorbed by the mitochondria. And then the far infrared is going to be absorbed by water. And what's really important about this, to people who are listening to The Collective, it may not resonate as it does with people who have studied infrared for a long time. But for years, people used to think that far infrared, because of the fact that it increases your core temperature and it's great for detox, people used to think that far infrared was the one that was really absorbed deeply.

Connie:

The reality is that the water is the receiver in your body for far infrared, which is really important to understanding the mechanism of action and how the body responds. And then for near infrared, it's the mitochondria, and then it converts into energy, which we've already talked about. And that is stored. And then it helps to provide really more, like a bike batteries inside your cells so that you have energy there when you need it, or if you get sick, you can pull from that.

Connie:

So that's why it's so important to understand Dr. Hamblin's research and studies and how chromophores respond and which wavelength is a right one, because otherwise, again, you're just thinking a light bulb is a light bulb, is a light bulb, or infrared is infrared, is infrared, and it's not at all the case.

Dave:

It's really interesting that near and mid is mitochondrial stimulating, because if you think about it, your neurons have about 15,000 mitochondria in them, and your normal cells have a few hundred mitochondria. So if you can improve mitochondrial function, your neurons, by definition, are ready to have a party. This new research that you're referencing here says, okay, if you can do far infrared, you get that effect but you get the mitochondrial and the healing, especially the neurological healing effect from a different spectrum in it.

Connie:

Yeah. Dr. Hamblin recommends... He's really passionate about the lower temperatures because your water molecules are tuned to the frequency to receive the infrared around nine microns. In order for your body to receive the wavelength around that, the surface temperature of the heater has to be essentially as cool as possible. So his perfect scenario would be, get inside a Sunlighten sauna, turn it on, and have the near infrared on, have the far infrared on, and get in right away.

Connie:

A lot of people get stuck at, "Oh, I want to preheat it and I want it to heat up and I don't want to get in until it's hot." And they get really stuck on the sweating aspect. And sweating is great. And we could talk about the BUS study. I mean, there's lots of great science and study on sweating, but reality is, you want that wavelength to be absorbed. You want that to get into your body. You don't want it to be in the air. And it gets absorbed into the body. The best resonance is the coolest temperatures from the heater.

Connie:

And then it starts to heat up, and then the body starts to change and you start to sweat and then you get other benefits. So it evolves. As you sweat, now you're starting to detox, which is a different benefit than inflammation. It's fascinating, this whole biochemical reaction from the different wavelengths.

Dave:

It's really incredible When you think about where we're going to go with infrared technologies. Tell me what's coming next for Sunlighten, whatever you can talk about, because it seems like we've already figured out these three wavelengths, but there's got to be some other stuff that you think we're going to figure out. Where do you think we're going to go?

Connie:

Yeah. So we're looking into sleep, into more science and sleep. We're looking into other neurological brain research and brain science. We're expanding on the near infrared as well as red light and really understanding the crossover there. And we have some other things that I can't share yet. But, I mean, Dave, it's amazing, because I'm still having fun. We've been doing this for a long time.

Connie:

But as science is evolving, as we're learning why the wavelengths work with the body the way it does, now it's making all of the intuition and my experiences and the letters and the stories that are received for all these years of people saying, "Oh my God, this changed my life and it did this and I had mercury toxicity, I had..." Whatever. Different types of conditions. Now I'm scientifically understanding, okay, so this is which wavelength, this is how it did it, this is why I did it. And now we just continue to hone in on different types of parts of the body and just understand as much as we can. So we're committed to the science and it's been very rewarding.

Dave:

Speaking of science, and something that I appreciated on our last episode, we talked about some evidence for finding a lot more toxins in sweat from infrared. But it turns out that wasn't a study, which is what we had talked about. And you let me know that was based on observations in a doctor's office but that it wasn't formally studied. So I wanted to call that out, which is cool. But you also brought to my attention the blood, urine, sweat study, and talk to me about that.

Connie:

Yeah. This is a fascinating study that was done from Dr. [Stephen] Genuis in Canada who wanted to... Essentially, he's an OB-GYN, and no wonder understand women's response to environmental toxins, which is the reason why he committed to doing study. The findings were that more toxins were removed with sweat than with blood and urine. In fact, mercury specifically, they measured the participant's blood and found no evidence of mercury. However, 15% of those individuals that had zero had a 100, all of them had mercury in their sweat.

Connie:

So if you're just measuring blood, if you're just measuring the toxins in blood, you potentially could be missing toxins that are stored in your body. And then take it one more step, they found that in an infrared sauna, you released more toxins than traditional saunas and exercise. And specifically, they measured... I mean there's a lot of them, but the ones that come to mercury, because that's obviously a really difficult one to remove from the body. Cadmium, nicotine, arsenic, aluminum, lead were some of the ones that were more effective using an infrared sauna via sweat than other ways such as exercise and traditional saunas.

Connie:

So that was the big. The big findings is there's ways to remove toxins through other ways, but sweat is a really powerful. A lot of people say, "Oh, sweat is just great for thermal regulation," but it's actually a great way to remove toxic elements. And we know for sure, in infrared sauna, it can be more effective. I mean, I'm a huge fan of exercise. Huge. And I always say it's great you sweat. And all sweat is good, but if you can change your body so that you're removing heavier toxins and toxins that can't be removed other ways through an infrared sauna, that may be a good resource for you.

Dave:

So it's important that you get into your sauna when you turn it on because you're going to be absorbing the types of infrared that don't heat you up very much. And they have direct biological effects on cell healing and on energy production in cells. And as it gets hotter and as you start sweating, the benefits continue for the first types of infrared. But then you get more of the detox benefits. And these are things that simply don't get released in urine, but they do get released in sweat. And that's another

question for you though. Should you shower right after you get out? Are you likely to reabsorb those toxins? Do you think about that much?

Connie:

We get asked that question a lot. And there's different schools of thought to that. Some people say that they are not going to be reabsorbed. Some people say that you should shower right away. So most people do rinse. You'll sauna and then shower and you can go straight to sleep. So most people do. I typically, my new thing is to sweat stack and keep my core temperature up as much as possible, as long as possible. If I can sauna at the end of the sweat stacking, great. But sometimes it doesn't work out that way. So I'll go from sauna to something else and I have been fine. So do you have a personal recommendation on that? I'd love to hear your thoughts.

Dave:

I believe mostly the old queen of England from back in the day. I take a shower once a month whether I need it or not. That's something like the 1700s. No, as soon as I get out, I'll rinse off. But I don't take a cold shower, I take a hot shower, unless I'm doing contrast therapy. And if I was doing that, then I would do hot, cold, hot, cold, hot, cold and I would end on cold. But otherwise, I think getting in the sauna and then taking a cool shower to cool down defeats the purpose. But getting in my Sunlighten and then staying sweaty after I just dumped a bunch of toxins, I hate to say it, but half the supplements that we swallow would work better if we just smeared them on our skin.

Dave:

Your skin is an absorption organ, so I don't think it makes sense to have mercury and other stuff covering my skin if I'm detoxing. So, I will just super-hot shower, rinse it off, dry off quickly, go about my day and still stay hot.

Connie:

Perfect.

Dave:

Now, something else I wanted to ask you about. I have noticed a very big change in my cognitive function the next day after usually a longer Sunlighten session if I take activated charcoal during the sauna and glutathione afterwards. What's your take on that?

Connie:

I have heard the same thing from many other people. So I've heard lots of different types of supplements to help do it with infrared. And so I think if that works for you, I think that's great. I mean we know the infrared is helping with your receptors, and I'm sure the charcoal and everything else is as well. So it makes sense.

Dave:

I think the sauna is going to challenge your detox systems. I'm sure your kidneys and liver appreciate that you bounce some extra toxins during it, and that you helped with toxin detoxing and transformation with glutathione. So I think it's a good practice. Charcoal before, glutathione afterwards,

and you'll probably get more results. But I haven't seen a study, that's just how those work. So that has to be how it works.

Connie:

Yeah.

Dave:

And guys, one more time, I want to share the sunlighten.com/dave. You can save up to 600 bucks if you want to add this to your biohacking stack. I really like having a sauna because it can be a social experience, it can be something that you use with other biohacks, or just time to journal or pay attention. And I have to admit this, I have actually just looked at Instagram while I was in my Sunlighten. The problem is, after about a half hour, the phone overheats, but then you can just hop out really quick, put the phone in a glass of water because they're all waterproof these days. It cools the phone down and then you go right back to doing whatever you wanted to do. And I have done infrared lives, I've done Instagram lives inside my Sunlighten as well. So you can do that as long as you don't point the camera down, that could be a problem. Yeah, I dropped the camera once and that was bad. Another time, I was doing some kind of video in the bathroom about some showery thing and I'm not wearing any clothes, but I'm putting the camera up, and there's a shower stall behind me with a glass pane. And so some people saw my butt. Sorry guys, you can't unsee that.

Dave:

What about lymphatic drainage massage when I'm in there? Would that make sense?

Connie:

Yes.

Dave:

Should I be rubbing with a towel? Should I be exfoliating? What else could you do if you were just going to go wild in your Sunlighten?

Connie:

Yeah. You could dry brush. It would be awesome. I mean, lymphatic drainage would be great. We have a Sunlighten day spa that's in our building here at our headquarters on the first floor. And so we recommend a massage and then sauna after. But if you can and you have the capabilities to do them together, that's great. I mean, I love stretching and really, really stretching, really pushing. You'll notice a big difference in your body from the moment you get in to when you leave as far as your flexibility and how far you can stretch. It's really good. It's excellent for muscle recovery.

Connie:

When I was training for my marathon, I used it. And I was a different person. I would come downstairs and get my semi sauna. I felt completely different when I started than when I finished. I mean, I just literally could leave, and not that I would go for another run afterwards, but I could have if I so wanted to.

Dave:

Okay.

Connie:

You can do lots of things. Stretch, dry brush, massage. I mean, personally, I really like just deep breathing and meditation and just centering yourself, it's a really great time to do that. But there's many different habits you can stack.

Dave:

What about Sunlighten date night? Good idea, bad idea?

Connie:

I think it's a great idea. I think there's benefits. We haven't talked about nitric oxide, but there's lots of-

Dave:

I knew you would say that.

Connie:

There's lots of... And you know what? We have the light therapy, the chromotherapy, the colored light therapy inside there. You can turn on some orange lights. The orange or red sometimes can help with libido.

Dave:

Do you have a disco ball that comes down and [inaudible 00:52:27] with Luther Vandross song and anything like that?

Connie:

You can strobe our remote control and our lights, if you put the colored lights on, there's lots of different options, Dave. Lots of different options.

Dave:

Okay.

Connie:

We have the sound therapy. So that's something. We talked about that last time. The acoustic residence therapy. I mean, that's probably not the best thing for a date night because that's designed to balance the brainwaves and allow the brain to completely shut down.

Dave:

And if you look at the definition of biohacking, you change the environment around you so you have control of your biology, your vibration, sound, light, heat, stuff like that is all good. So the idea that you're building into a single system people can use is super cool.

Connie:

Thank you.

Dave:

Now we're coming up on the end of the interview. So I wanted to remind people just one more time, sunlighten.com/dave, and use this code Dave or just mention me and they'll give you up to \$600 off. So think about it. You can do the smaller unit that will give you the benefits of hyperthermia, and I think that those are real. And I think that that goes way back, and that it'll probably help you fold proteins better, which we didn't mention, but that's probably outside the scope of our time here.

Dave:

Then we also have the full size saunas that do full spectrum, all sorts of cool stuff. And that's what I'm using. That's what I've used for 10 years. So Connie, thanks for the discounts for our listeners and for bringing up the new study, the blood, urine, sweat study and the things about neurons and the different absorption of different rates. I think there's been a lot to learn in this episode.

Connie:

Thank you. Thanks for having me. It's always great to be here.

Dave:

Guys, if you liked this episode, think about adding infrared to your life. And it's okay to go outside in the sun to get it. You don't have to spend money to be a biohacker. You are changing the environment around you and inside of you so you have full control. And you may say this is the right thing for me, or you may say it's on my bucket list. And that's totally fine. I did not go out and buy everything on the planet all at once because I couldn't afford to do it because I had toxic mold.

Dave:

And what I did is, I found the things that gave me the most return in the least amount of time and effort and money. And over time, that evolved into biohack. So I'll always guide you to the things that work better and less time. That's what I do at Upgrade Labs. That's what I do with all this stuff. So this is definitely worth it. [Sunlighten.com/dave](https://sunlighten.com/dave). I'll see you all in the next episode.