



EPISODE #215

HOW PHOTOBIO-MODULATION WITH NEAR INFRARED AND RED LED'S INCREASE ENERGY WITH JUSTIN STRAHAN

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Wendy Myers:

Hello , everyone. Welcome to the Live to 110 Podcast. My name is Wendy Myers. You can find me at Liveto110.com.

We have a very interesting podcast for you infrared sauna junkies today. I talk a lot about infrared saunas and advocate their use with all of my clients that I work with personally. And I think they're a very, very important aspect of health and longevity and increasing energy and have detoxification benefits.

So, today, we're going to be talking with Justin Strahan. He is a maker of Joovv near infrared and red LED partners, Joovv.com. And so we're going to be talking about the benefits of photobiomodulation with light therapy with a near infrared and red LED lights that he makes and the benefits of those in stimulating mitochondria and energy production, and the differences between those and the effects of near infrared saunas (like far and near infrared saunas that people typically use for detoxification).

I personally have been using a Joovv near infrared and red LED combo light. I'm using it separately for my sauna. I still do my infrared sauna sessions. But I also have added doing about 20 minutes per day of the near infrared and red LED photobiomodulation. I've seen tremendous benefits in



my skin and other types of benefits (i.e. a boost in energy). And so I wanted to talk to Justin, the maker of the Joovv products, so you can enjoy the health benefits as well of this revolutionary technology.

Please go check out my book, *Limitless Energy*, on Amazon. I wanted to write this book to tell you about different ways that you can increase your energy levels that you may not be thinking about and certainly answers that you are not going to get at your functional or even medical doctor.

So many people don't realize why they are tired. And toxins and chemicals are a big reason why—specifically certain toxic metals that interfere in your mitochondria ability to function. Your mitochondria make your body's energy. And I teach you about what metals are interfering in your energy production and how to detox them and expel them from your body.

I also talk about a revolutionary way to improve your energy through bioenergetics in the last chapter of the book. So, a lot of revolutionary ways to increase your energy levels and get limitless energy for life.

So, go check out my book on Amazon, *Limitless Energy: How to Detox Toxic Metals to End Exhaustion and Chronic Fatigue*.

03:13 ABOUT JUSTIN STRAHAN

Wendy Myers:

Our guest is Justin Strahan. He's not just any man because he can take his wife's dream and make it a reality. And this is just one of the reasons why Justin is so special.

Intuitive and thorough, Justin's affinity for process and extreme attention to detail is why Joovv is lucky to have him as head of R&D. Prior to inventing and developing the Joovv light, he spent his career as an engineer managing design and development teams.

Justin considers himself blessed to share life with his high school sweetheart, Melissa, and their six children. Together, they share the same passion for bringing health and wellness to the world.

And fun fact, Justin can play drums and trumpet like nobody's business.

You can learn more about Justin at Joovv.com.



Please keep in mind this podcast is not intended to diagnose or treat any disease or health condition and is not a substitute for professional medical advice. This podcast is for entertainment purposes only, so please consult your healthcare practitioner before engaging in anything that we suggest today on the show.

Justin, thank you so much for coming on the show.

Justin Strahan: Yeah, thank you so much, Wendy. It's an excellent opportunity.

Wendy Myers: So, why don't you tell us how you got into making near infrared and red LED products.

Justin Strahan: Sure! My wife, Melissa, was really the one that first came across the technology. She had heard about it and went to try it at a local tanning salon that had beds that had been converted to red light bulbs.

And so she signed up for a series of sessions where she could go daily for a period of a few months. And she was quite honestly blown away by the results that she had.

She had struggled with some eczema issues on different areas of her body. And so she had just excellent results where, basically, it totally cleared that up in a period of around two months.

She also started to notice improvements in stretch marks and other areas on her body and just her overall health and the glow of her skin.

So, she really fell in love with the technology and signed up for another few months of sessions. But as those wrapped up, she really was desperate to find another solution as it became increasingly difficult to fit that into her daily schedule not to mention the cost of the treatment.

So, she really started to scour the market to try to find something that she could use at home that would fit much easier into her daily routine.

Wendy Myers: And so, you set out to make one for her. I love that story.

Justin Strahan: Yeah, it's fascinating. I have to admit. I was first skeptical of the technology to begin with. And then, as she asked for my assistance in developing one—in hindsight, I should have been much more kind to her to launch into discovering and learning more about the technology.

So, first, she kind of dug into it. She had seen some kind of homemade devices that used infrared



heat lamps. And so she wanted me to try to make one of these devices.

Having an engineering background, it wasn't something that was too daunting for me to tackle. I read about it and basically kind of just followed the directions and built the device using these infrared heat lamps.

And so, after trying that for a while, besides producing a lot of heat, she didn't really feel like they were producing the same types of benefits that she had with the specific wavelengths previously.

So, she came back and is like, "I'm not sure what it is. But I want you to really dig into this because I know if you dig into this with your engineering mind, you're going to really get to the bottom of this. And we can get a device that works really well."

So, I started to dig into the science. And quite honestly, I was blown away by the sheer amount of studies on the topic of photobiomodulation. And it was fascinating to me, just the wide range of health benefits that had been documented. It went far beyond just skin benefits. I mean, it was everything from muscle recovery, reducing soreness in joints, reducing inflammation. It was all seemingly endless.

So, in the studies, it was clear to me there was really just two main factors that determine the effectiveness of a device—the intensity or the radiance, and then the wavelengths of course. And then, I guess the third factor that's important as well is just basically the size of the treatment area (so how big of an area of your body are you able to treat).

So, those are the things that really got us started. And that's when I really launched off into trying to develop a device that would be feasible and convenient to use at home and add to anyone's daily routine.

07:56 DIFFERENT WAVELENGTHS OF LIGHT

Wendy Myers:

And so, let's talk about the products that you make. I'm using one at home. And when I was visiting Joe Mercola's house—I was visiting him last month in Florida—he uses a Joovv near infrared and red LED combo product that you make as well. You can't get a better testimonial than that. Dr. Mercola is using one.

So, how does this all work? You created a near infrared LED panel. And you also have a red light LED panel. And you also make a combo product. So let's talk a little bit about the differences between those three products.

Justin Strahan:

Sure! I guess kind of backing up into the light wavelengths in general and sunlight, you obviously have a wide spectrum of wavelengths beginning in the below 400 nanometer range with the UV light, going into the visible light spectrum between 400 and 700 nanometers, and then on into the near and far infrared wavelengths beyond.

The infrared wavelengths are typically broken up into three components: IRA which is roughly between 700 nanometers 1300 nanometers; IRB which is 1300 to 3000 nanometers; and then IRC which is above 3000 nanometers. And those different wavelengths have very different biological impacts on our bodies.

What scientists have found is there's something called the "near infrared window" or "optical window" where these wavelengths have the unique ability to penetrate into our tissues. So roughly between 600 and 900 nanometers, we have wavelengths that are very effective at penetrating our tissues

Interestingly, wavelengths below 600 nanometers tend to be absorbed quite quickly due to the blood that's in our tissues. And wavelengths that are longer than 900 nanometers tend to be absorbed more quickly by the upper tissues of our skin due to the moisture that's in our tissues.

So, the example I'd like to give as a picture is to demonstrate if you're outside on a very hot day (such as something that we experienced while in Austin here this past weekend) and the sun is very intense, as you feel that radiant heat from the sun, what you're actually feeling are those mid and far infrared wavelengths.

And when a cloud blows over and blocks the sun, you notice that the light or the visible intensity of the light outside doesn't change drastically. But you do feel a drastic difference in the radiant far infrared heat. And it's almost like a light switch went off, and all of a sudden, you don't have that intense heat on your skin.

Wendy Myers:

And then, you get depressed and very sad.

Justin Strahan:

You wait for it to come back. So that's kind of an overall picture.



So, what we sought to do is really go after the science and research studies that demonstrate which wavelengths in that window are the most effective. And in the field of photobiomodulation, one of the main theories on how these wavelengths work and what they do to stimulate cellular function or mitochondrial function really boils down to the fourth phase of cellular respiration which is cytochrome C oxidase or CCO.

And what they've discovered is that there are a few different peaks that demonstrate which wavelengths are the most effective at boosting CCO which result in increased cellular function. And specifically, wavelengths around the 660 to 670 nanometers in the red spectrum are very effective as well as wavelengths between roughly 800 and 880 nanometers. So those are why we chose those two different wavelengths.

11:57 JOOVV PRODUCTS

Wendy Myers:

A lot of people, when they think of infrared saunas, they typically automatically think of like a near infrared sauna. They think of like a far infrared sauna, like the wooden sauna with the panels that heats you up. And then, there's the near infrared bulbs (the near infrared bulbs, the incandescent lamps that you talked about before).

So, let's talk about the difference between those and the near infrared LED and red light LED combo that Joovv produces. What are the differences there?

Justin Strahan:

Sure! Yeah, that's a great question. I think there's a lot of confusion quite honestly in the marketplace about that. I think when most people hear the term "infrared," to them, that means either a single wavelength or a very narrow band of wavelengths, when in reality, as I mentioned, it's a quite broad range of wavelengths.

So, wavelengths that are optimal for producing heat such as used in saunas are really the longer wavelengths. They're more effective at producing that radiant heat (kind of as I gave that example of sunlight), whereas the wavelengths that we use in our Joovv combo or Joovv near infrared light devices at 880 nanometers are actually not too far beyond the visible light spectrum.

And the main difference with these wavelengths is, because they fall in that optical window and because they are the optimal wavelength to boost cytochrome C oxidase production, that's why

they are effective at photobiomodulation.

With near infrared heat lamps, for example, the bulk of the energy that they deliver is outside of those wavelengths. You really have a very small portion that's optimal for photobiomodulation, roughly in the neighborhood of 2% to 4%. So while they have benefits related to the heat-inducing component as saunas are intended to, they really aren't effective in terms of boosting cellular function in the same way that photobiomodulation devices that use these specific wavelengths.

Wendy Myers: Because the actual near infrared lamps (as kind of what they're referred to), they're actually mostly far infrared wavelengths, correct?

Justin Strahan: Yes. A good portion of the energy is in the far- and mid-infrared wavelength. While there certainly is some, because it's not focused on specific wavelengths, it's not really enough to produce a biologically significant amount.

Wendy Myers: Yeah. And I've used those lamps for years. And that's what I started out with. The lamps, really, the purpose of them is really to heat you up. And that's going to produce the detox effect. You're really not getting a tremendous amount of benefit in mitochondrial stimulation and energy production with those types of lamps.

And there's also a problem with the intensity. It's not just the wavelength; it's the intensity. They're really kind of a low intensity bulb.

Justin Strahan: Yes, surprisingly so given the amount of heat that they produce, which is why the the most effective photobiomodulation devices originally before the advent of LEDS really came upon the scene, lasers were used. But now that LED's have been proven to be just as effective and can be used over a much larger treatment area, the most effective devices really have gone to medical grade LED's that deliver a high intensity, a high amount of radiance.

Wendy Myers: And so when you're looking at buying a near infrared product for detox for the various benefits that near infrared provides, you really want to look for the right wavelengths, that there's effective radiance (there's an intensity there), and also, a large treatment area can be treated.

I know there are a lot of things in the market. Like on Amazon, you get these little things. But they're very small. You can only do one little area at a time. I'll pass on that.



So, behind Joovv, you have the Combo Max product, the Joovv Combo Max. Can we try that on first, so we can kind of see what that looks like? It's very intense.

Justin Strahan: It is very bright, so I apologize to the audience.

Wendy Myers: I've been using mine. I use it for 20 minutes a day. And I've had just an unbelievable improvement in my skin. I had some little rashes (that's maybe TMI). But it's cleared up. I'm really, really happy with the improvements I've had in my skin.

I've had a boost in energy as well because the light stimulates mitochondrial production. The mitochondria runs by light. That's why the sunlight gives us a boost. That's part of the way our mitochondria works to produce energy.

And so, that obviously is going to affect a large treatment area and much more productive for your time.

Justin Strahan: Yes. And that's really what my wife kind of came to find out when she was scouring the market. Most of the devices were small handheld devices. It would take a significant amount of time to treat just your face, let alone the rest of your body.

So, that's really what started us down this path. And as you've mentioned, with this device, you're able to treat virtually one whole side of your body at a time.

We do have different sized devices as well. This is our largest, what we call our Joovv Max. And then, we have a Joovv Mini which is essentially two of these panels, as well as a Joovv Original that's five of those panels.

So, we do have some options. But ideally, it's something that you can treat your whole body with.

What I think most people don't realize—and what I certainly didn't realize—was the incredible role that light plays in overall health. And as you mentioned, the energy boost that you feel—I mean, we hear that a lot from our customers.

In fact, some people I know really love to dig into the science. If you go to our website into the Learn tab, you'll see many different articles that link to published medical studies, research studies, on various topics.



But if that's not your cup of tea, we also have a section on reviews where you can read what our customers are saying in their own words about their experiences. And quite honestly, that might be more impressive thing to look at.

So, we've had an overwhelming response. I think I was just telling another co-founder, Scott, the other day that I think our devices work way better than we ever anticipated they would primarily because they're more intense than most other devices on the market and even a lot of the published studies.

To give you an example, many of the studies for skin health show a total energy delivery of about 5 joules. And with our devices, you would be able to get that in less than two minutes (or actually less than a minute) at about eight inches away from this device behind me. And for other benefits such as deeper tissue, such as muscle recovery, it takes a significantly higher amount of energy.

There is one study, for example, that was done on collegian athletes over a 15-month period of time, nearly 400 collegian athletes. They were basically documented. Every time that an athlete got injured and basically couldn't be on the playing field, they divided them into two camps—one that received the photobiomodulation therapy, and one that did not.

In this specific study, they were using the near infrared wavelengths in that same window that I talked about. And when they were given the treatment, they were given 60 joules of energy. So with this device behind me, that would take 10 minutes of treatment (so the same amount that you are getting).

And the study was pretty impressive. The students that did not receive the treatment, the average time to getting back on the playing field was just under 20 days (or essentially, 20 days before they were back in the playing field). And for the athletes that did use the treatment, the average time was cut in half, under 10 days.

So, that's one of just many different studies that prove some of the benefits of red and near infrared light and how that can affect athletic performance recovery.

There's just such a wide range of benefits. When you start to explain it to people, it almost sounds like it's too good to be true. But there's literally documented research studies to point people to. So it's pretty amazing.



20:32 BENEFITS

Wendy Myers:

And what are some of the other benefits? There's skin health, there's enhanced muscle recovery. What are some of the other benefits of using a Joovv LED?

Justin Strahan:

Sure! There are a lot of them that are documented that I would say these things would be similar to the tip of the iceberg. They're the things that come to the surface that you're aware of, that you see a difference. But I think all of us have grown up in a society where we were basically taught you have an issue, then you treat the symptom. And then, you move on. And then you have another symptom come up, and you try to treat that symptom.

And what I really try to encourage people to think of is to try to think deeper than that. With our devices and photobiomodulation, you're really actually feeding your cells the energy that they need to act at a higher rate or optimum level.

So, while there many different things that studies document, you mentioned some of them, I think we're just scratching the surface in terms of the short and long term health benefits of giving your cells adequate light.

You mentioned muscle recovery, pain, inflammation. There's even documented studies on cognitive benefits, eye health benefits.

Basically, with your eyes, a common question we get is like, "Should I shield my eyes? It seems really bright." It is bright, but I usually encourage people to start with their eyes close, and then gradually open them as they feel comfortable.

But there absolutely are documented studies of eye health benefits, basically boosting retinal function through the same mechanism of action with the mitochondria. And the results that people are getting with that, we've had some of our own customers that tell us that their prescriptions are changing or getting better for the first time in years.

So, it's definitely interesting, the different range of benefits that people experience.

Wendy Myers:

And also, increased testosterone is another.

Justin Strahan: Yes! Interestingly, that's probably one of the first ones that that really kind of surprised us quite honestly.

When we first launched the product, we really anticipated the bulk of our customers to be looking for skin health and various beauty benefits. That's kind of the typical space we see with light therapy in salons and spas and so forth.

But we've had an overwhelming response from the biohacking community, the fitness community, even professional athletes for all these other benefits. As you mentioned, testosterone is another one that's being started. We had some initial research studies that are quite promising.

Wendy Myers: And even enhanced weight loss. That's another benefit as well, correct?

Justin Strahan: Yes, there have been some impressive studies. They're preliminary, so I don't want to make it sound like there's a hundred studies that are double-blind placebo studies on weight loss, but there are some studies that are pretty impressive with the results that people are getting with those.

Wendy Myers: Yeah, I think just by increasing your energy levels and the efficiency of how your mitochondria and your metabolism work, there are going to be some byproduct of enhanced weight loss. It's not like you're going to be shedding pounds using the Joovv. But there are some side effects that carry over into weight loss.

23:56 ENERGY PRODUCTION AND SAUNAS

Wendy Myers: And let's talk specifically about energy production because that I think is the most profound benefit that you can get by using a Joovv near infrared and red LED combo light. So talk to us about that a bit.

Justin Strahan: Sure! The way that I like to explain it is you're literally providing food directly to your cells. And it's something almost more direct even than food. We're certainly not saying it's a substitute for that. But I would argue that it's of equal importance or nearly equal importance.

And that is a common thing that people experience, increased energy. A common response for people that try it in the evening is they've had a stressful day, they're all worn out, and they're



kind of on edge and stressed out, and the treatment, they find it very calming, relaxing.

And I think there are a lot of different components there—the cognitive benefits that have been documented, the physical benefits as far as increasing blood flow and reducing oxidative stress.

So, there are definitely a lot of reasons why the way it lines up with the research studies.

25:09 DETOXIFICATION

Wendy Myers:

And so, let's go back to detoxification and infrared saunas.

So, far infrared sauna (and near infrared saunas too), there are lots and lots of research that show that the heat from those types of saunas detox our bodies. And that mechanism is primarily done through heat, but also increasing the amount of EZ water that we have in our cells, the fourth phase of water. It increases that type of water, and that dramatically enhances detoxification effects.

So, talk to us about does a Jovv near infrared and red LED detox your body and therefore replace a far infrared or near infrared type sauna? Or is it something that you want to use in conjunction?

Justin Strahan:

I would argue that both therapies have their place. And there are proven benefits.

As you mentioned, with the heat-based therapy, you do have some documented studies on the detoxification benefits as well as some of the cardiovascular benefits that can assist with that.

As you mentioned, the fourth phase of water—which, by the way, I love Gerald Pollack's book by that title. It's certainly a fascinating topic, the incredible role that water plays in this whole process. He certainly talks about light and specific wavelengths and how they basically help the water form EZ water in our cells as they are essentially charged. So you basically have this electrochemical process of our cells and the mitochondrial function that light essentially boosts.

So, there absolutely is documentation that the wavelengths that we use assist in that process.

I don't think there's conclusive proof as far as some of the differentiating factors to compare the two. So I would just say, if you have a sauna and you enjoy using it, absolutely keep using it and enjoy it. And I think photobiomodulation is something you should consider adding as well.

Wendy Myers: Yeah, that's the recommendation I've been making for clients, to use either a far infrared sauna or a near infrared sauna. I recommend sunlight and saunas. And then I also recommend Sauna Space Near Infrared bulb saunas. But adding a Joovv panel for the near infrared and red LED lights to have a complimentary and different type of effect that you're not getting with the benefits—like you don't get the intensity of the near infrared and you're not getting any red LED benefits. So it's great to add the Joovv panel to either one of those saunas if you already have one.

Justin Strahan: Yeah, I totally agree.

Wendy Myers: Yeah! Because you're going to get the detox effects from the heat from the far and the near infrared saunas. But you want that intensity of the near infrared and red LED's for the photobiomodulation benefits.

Justin Strahan: Exactly! The near infrared heat lamps, for example, the amount of wavelengths that are in the optimal zone for photobiomodulation, because you do have so much heat that's delivered along with those, you would actually really overheat the tissue by trying to do photobiomodulation or get enough intensity with the correct wavelengths that you'll kind of be counterproductive.

So, for that reason, you're really best served by having a separate device that's specifically geared towards that benefit.

Wendy Myers: Okay, great!

28:42 SAUNAS WITH WIDE BANDWIDTHS

Wendy Myers: So, let's talk a little bit about some of the issues with saunas that claim to offer near, mid and far infrared wavelength. A lot of people think, "Oh, wow! That sounds great. I'm getting all the different wavelengths." So talk to us a little bit about those claims.

Justin Strahan: Sure! I think the important thing to remember is that the purpose of saunas is to generate heat. The traditional saunas—we did an article on our website here a few weeks back. We talk about kind of the history of saunas in Finland. And this is something that's really come to the US over the past few decades. And it's really taken off—and particularly with infrared saunas as you've mention.



But being that the purpose of saunas is to create or generate heat, really, the optimum wavelengths that do that the most effectively are in the far infrared spectrum or above 3000 nanometers.

Now, there are certainly other ways that you can generate heat with the mid and even some with the near infrared wavelengths. But marketing centers around delivering this wide bandwidth of wave lengths really isn't supported by the science of what the benefits from saunas really come from.

Wendy Myers: Yeah. And so, some of these saunas that claim to have near, mid and far infrared, they might have a bulb or something in the ceiling for the near infrared or a few little lights, but maybe not really doing much.

Justin Strahan: Yeah. Those wavelengths, while they're certainly part of the sunlight's spectrum, they are not going to produce a whole lot of heat. And unless they are at the specific wavelengths for photobiomodulation, they're really going to have almost zero effect for that as well.

So, I would argue that your best served, if you're in the market for a sauna, to get one that really focuses on the heat that's generated. And that's going to be best served with longer wavelengths.

Wendy Myers: Yeah. And so, I've used a near infrared incandescent bulb sauna for a number of years. I had like three bulbs hanging from my shower head, and I had a little rig set up that way. And the problem was I wasn't sweating. I wasn't getting enough heat.

So, a lot of people listening may have a little set up like that. And the whole point is to get the heat adequate enough so that you're sweating and enjoying those detox benefits.,

Justin Strahan: Absolutely!

Wendy Myers: Yeah.

31:03 WHO USES JOOVV PRODUCTS

Wendy Myers: And so, let's talk a little bit about some of the clients that you have. Tell us about some of the athletes or some of the other clients that are using a Joovv near infrared and red LED product.

Justin Strahan: Sure! Well, as I've mentioned previously, we have a wide range of people that use our products. You mentioned Dr. Mercola. And we've had a wide range of people. We have MMA fighters, people that are with the UFC—Jeremy Stephens, TJ Dillashaw. We also have some other professional athletes in major league baseball.

We've actually been in discussion with some NBA trainers that are interested in the technology as well. And shortly coming here, we'll have a pretty cool announcement for an NFL player that's partnering with us as well.

Wendy Myers: Oh, that's right! And Ben Greenfield...

Justin Strahan: Not to mention Ben Greenfield.

Yeah, there are so many people that are excited about it. We've actually just finished recording a podcast down in Austin, Texas with Aubrey Marcus of On It. He has actually a couple of our devices, and is absolutely loving the therapy for sure.

Wendy Myers: Fantastic!

32:11 TIPS ON USING THE JOOVV PRODUCTS

Wendy Myers: So, let's talk about some tips on how to use the Joovv products. When I use mine, I do about 10 minutes on one side. I do a little rotisserie chicken and turn over and do 10 minutes on the other side. Are there any tips, other tips, that you can give us when using the product?

Justin Strahan: Sure! Well, I guess, there are a lot of ways you can use the therapy. As I've mentioned, there's benefits from small dosages (particularly for skin health benefits), but I do encourage people, if they want the best, overall, optimum health benefits that include deep tissue, doing that around that 10-minute window, 10-minute timeframe for each area is really what I would recommend.

That's what I personally do. So, I think to see the best results, I think that's where I would start.

The distance from the light effects affects the intensity as well. So if you're three feet away, you're going to get a much lower dosage obviously than if you're right up next to the device. So it's really intended to be treated between 6 to 12 inches away from the device.

As I'm sure you can attest to, it's not a very intense heat. It's pretty much just like a gentle warmth. You can feel a little bit of warmth from the device. And you have the fans on the back of the device that keep the LED's cool so they are working optimally.

Wendy Myers:

And so, when you're using the device, is it penetrating your tissues like say an infrared sauna? We know that infrared rays penetrate inside of our tissues. So how does that work? Is it penetrating our tissues? And do you know how much?

Justin Strahan:

Sure! Yes, they absolutely are. And you can feel this particularly with the wavelengths that we use.

I mentioned that near infrared window. And these wavelengths in this range are actually quite effective at penetrating human tissue.

The absorption, it gets rather complicated when you start talking about the science of absorption. You look at the scale, and it's like a logarithmic scale. So you go up one, and it's 10 times absorption and so forth.

But I would just say that the overwhelming evidence is that red and near infrared in particular are very effective at penetrating human tissue, even including bone.

Wendy Myers:

Okay. But you want to do both sides, correct? You want to do one side and do the other side?

Justin Strahan:

Yes, yes.

Wendy Myers:

And how often would you recommend someone do it? Can they overdo it?

Justin Strahan:

Sure! I would argue that I have yet to see a study that shows that you can overdo it that demonstrates that you're going to have negative effects if you go too far. There are some thoughts out there that if you get too much, you're going to either level off or maybe even have negative effects. But I would argue with studies that show benefits up to over a hundred joules of energy documents that there can be benefits even with very high dosages.

So, I would say typically recommend that people do the treatment daily, although I will say that there are times where you may want to do more than once a day. So, for example, if you have an injury or something where you find that the tissue is inflamed, you might want to do a treatment more than once a day just to help with the inflammation and help that healing process.

Wendy Myers: And so, should you avoid doing it in the evening because it does stimulate your mitochondria to give you energy? And this is, of course, the combo product where you have the near infrared and red LED lights. So should you avoid doing it at night or what are your thoughts on that?

Justin Strahan: There are a couple of different thoughts there. I would say really any time other than maybe first thing in the morning, I think you'll be happy with the results.

Sunlight is a very powerful, powerful thing that our bodies need, particularly through our eyes. Optimally, you'd get sunlight early in the morning to help set your Circadian rhythm.

But with the photobiomodulation, it's really something that your cells can utilize and have benefits throughout the day.

Quite honestly, many people will find it very relaxing—and myself included—to do the treatment in the evening or even right before bed. It can just about feel like it just knocks you out. It helps to just calm yourself and reduce the stress.

So, I encourage people to kind of basically experiment with that a little bit and see what works best for them.

Wendy Myers: Yeah, people are very different in how they react to things. And just like with infrared saunas, I've had a client say it stimulates them a lot, and other people saying that it relaxes them. So everyone is a little bit different I think in the timing that they should do these types of treatments.

Justin Strahan: Right!

36:49 CONTRAINDICATIONS

Wendy Myers: And so, let's talk about any contraindications. The first thing people would probably think is, "Should I protect my eyes?" You kind of addressed that earlier. But are there any contraindications that you found in using near infrared or red LED's.

Justin Strahan: Sure! Well, there are rare cases where people have say photoreceptive medication that they're on. That would be something they'd obviously want to be careful with and discuss with their physician.

There are some rare cases of people that have pigmentation issues. There's some conflicting



evidence on how photobiomodulation affects those issues. Some seem to indicate that it can help with it, and others, in other cases, it doesn't seem to be as effective.

But overall, there's very little documented evidence of contraindications with photobiomodulation.

Wendy Myers:

Okay, great.

37:41 60-DAY RETURN POLICY

Wendy Myers:

And so, is there anything else perhaps that you haven't talked about that you wanted to mention?

Justin Strahan:

You know, I think we've touched on a lot of the topics. It's something I could ramble on for a long time because it's something I'm so passionate about. And there's so many people that I think can benefit from the technology.

I encourage people to check out our website if you're curious and want to learn more.

Another thing I'd like to highlight is that we do offer a 60-day trial. So, if you purchase a product, we have a 60-day return policy. So if you're not happy with it for whatever reason, you can return it for a full refund.

So, quite honestly, something that gets taken advantage of very rarely, but it kind of offers that peace of mind especially for people that are maybe not completely sold on the technology, but they're excited about kind of giving it a shot.

38:30 NEAR INFRARED VS. RED LED VS. BOTH

Wendy Myers:

Well, I have one more question. There's a question I've gotten a lot when I'm answering questions on social media and what-not. So you sell a near infrared LED, a red LED product, and then a combo near and red LED product. So, why would someone want to buy the LED's separately or just do the common product? It makes sense to me to just do the combo product because you get both.

Justin Strahan:

Yes, yes. To explain the differences, studies seem to indicate that the red wavelengths in the 660 nanometer range are very beneficial for skin health benefits, and primarily because those



wavelengths are absorbed more easily or more quickly by the upper skin tissue, whereas with the near infrared wavelengths, those tend to penetrate more easily to deep tissue.

So, for benefits such as muscle recovery or soreness (such as the study I previously referenced with the collegian athletes), they find that near infrared is more effective at that.

So, most of our customers have some interest in both of those benefits. So for that reason, our combination devices, easily, are most popular.

Wendy Myers:

Okay, great. Yeah, just for any one purchasing, just be aware that you have three different options there.

39:47 THE MOST PRESSING HEALTH ISSUE IN THE WORLD TODAY

Wendy Myers:

And so, I have a question I like to ask all of my guests. What do you think is the most pressing health issue in the world today?

Justin Strahan:

I think the most pressing health issue today is that we've become so disconnected from the way we were meant to live in this world, namely being connected to the earth by basically being grounded, being plugged into the sun as a natural charger, if you will, for our bodies. And so I think getting back to that is something that we can all benefit from.

And that's where I really see photobiomodulation as something that can benefit so many people. If you can spend several hours a day in the sun, more power to you. But many of us are so busy that it becomes difficult to do that. So, I think that's where what we offer is an important way for people to kind of supplement what they get from natural sunlight.

Wendy Myers:

Yeah, it seems like it would probably be great for people that suffer from seasonal affective disorder and depression where they're just not getting any sunlight. The sunlight emits a lot of near infrared rays, and the Joovv can help supplement that when you can't get that.

Justin Strahan:

Yes! And in fact, if you read through some of our reviews, you'll see some people that highlight that benefit. And so that's something that has been documented.

And as you mentioned, it totally makes sense, the sun does obviously contain a significant amount

of infrared wavelengths and of course red.

Wendy Myers:

Yes! Well, Justin, thank you so much for coming on the show> I really appreciate. I know our listeners are really, really hungry for this information because everyone listening, they love infrared saunas. Or if they don't have one, they want to get one and use one because I've talked so much on the podcast about the benefits.

And so, you've added a whole other spectrum of things that you can do when it comes to using infrared and photobiomodulation and adding that to your health regime.

Justin Strahan:

Well, excellent! I appreciate the opportunity. We look forward to helping your listeners if they have any questions afterwards.

41:49 WHERE TO FIND JOOVV PRODUCTS

Wendy Myers:

And so, tell us where we can find your products.

Justin Strahan:

Sure! Our website is JooVV.com. And you can purchase our devices right there. We have, as I've mentioned, the Learn tab as well as the Reviews tab. It's a great way to learn about the technology. That's really been a key focus of our approach, to really bring critical thinking and information that adequately describes the science and technology of photobiomodulation.

Wendy Myers:

Right! Well, thank you so much for coming on the show.

Justin Strahan:

Thank you, Wendy.

Wendy Myers:

Thank you so much for listening to the Live to 110 Podcast. You can learn more about me at Liveto110.com. You can learn more about my detox and energy rejuvenating program at MineralPower.com.

And if you liked what you heard, please give a review in iTunes. It helps more people find me. We enjoy a hundred thousand listeners per month. I'm so, so thankful to everyone that's been listening over the last four years. We've got four more years to go. I really enjoy recording the podcast and talking to experts in the field of health every week. It's just really enjoyable. I love teaching you guys more about how to upgrade your life.



Thank you so much for listening to the Live to 110 Podcast.