Introduction to Red Light Therapy

Welcome back to the conversation, Ari. I'm so happy you're here. I could not possibly host a summit on resolving inflammation without having one of the world's most well-known red light experts as a featured speaker.

Thank you for being here. My pleasure. Thanks so much for having me. Yes. So, you know, among other things, you were talking about red light before anyone else was and before it was as mainstream as it is now.

So we're going to dig deep into this conversation. You are the founder of the Energy Blueprint System. It's a comprehensive lifestyle and supplement program.

You've helped more than 2 million people and counting experience optimal health, better performance, more energy. You're also the bestselling author of The Ultimate Guide to Red Light Therapy, which I have right here, which is the most popular book ever written on the subject.

You can see mine is well, dog eared and tagged. You're also the host of the popular The Energy Blueprint podcast. You feature the world's leading natural health experts.

And finally, you're the founder of Human Optimization Your latest project in unveiling a new paradigm on health and longevity. So digging right in here, we're at the Silent Killers Summit.

We're talking about the root causes of chronic inflammation and disease, and we're talking about solutions. So red light is the topic of today and it falls into the solution bucket.

So start off by telling us why people should care about red light and your infrared light therapy, what it can do for us and how that light can impact our health and help start solving some of those root cause problems for us.

Yeah, it's a really interesting story. This whole area of of light and red light, you know, I think for most people who are stumbling across this for the first time, it seems odd that to think of light as being related to human health in some sort of profound way, it's it comes across as almost gimmicky, like, what are these, you know, silly red light devices?

Like, how how would that influence my health? We're used to thinking of light in a couple of ways. One is in terms of our ability to see like we go into a room and, you know, we flip on a light switch.

So we see light is the absence of darkness. Light is daytime. Light allows us to see and function. And we're used to thinking of light in terms of like plants and and photosynthesis.

And, you know, light is bioactive in plants and stimulates these these chemical processes of photosynthesis. I guess we all learn about this in grade school and high school biology, and that's how we're taught to think about light.

We're not taught about light as being bioactive in humans and in human cells, but turns out it is. And actually, if you think about it, we know a couple layers of this story that people are actually familiar with, though most people haven't really thought about it deeply enough to realize how bioactive light is.

But we know that we get vitamin D from the sun. Vitamin D actually isn't a vitamin. It's a hormone and it's a hormone that influences the expression of over 2000 genes in our body.

Turns out light like we go in the sun, sun, sunlight shines on our body, on our skin, and leads to an increase in a hormone that influences the expression of over 2000 genes.

Turns out light is profoundly bioactive in humans, not just plants. There's another layer to this story that many people now are much more familiar with, and they were even five or ten years ago, which is the circadian biology component of the story, which is, you know, we look outside, if we see a blue sky, that's blue light and there's plenty of blue light in the sun, though the sun doesn't appear blue.

But part of that spectrum is blue, light blue, the blue wavelengths of light, and those blue light photons enter our eyeballs and hit receptors in the back of our eyeballs and then get transmitted as electrical signals through nerves into a part of the brain called the Super charismatic nucleus.

And this is where our circadian clock is, like a 24 hour biological clock. And it turns out those electrical signals from light entering our eyes influence a whole bunch of hormones.

For example, testosterone and cortisol and melatonin and others and neurotransmitters and a huge sequence of coordinated biochemical call and cellular and subcellular changes that occur in almost every system of our body.

And it controls our sleep wake cycles. It literally controls is the fact that every night, through no volition of your own, you enter into an entirely different state of consciousness for seven or eight or 9 hours and then again the next morning, through no volition of your own, you wake up and you enter into a new state of consciousness.

All of that is heavily influenced by light. That's that 24 hour clock in your brain coordinating all these physiological responses. And it turns out it's a hugely important part of health.

So, you know, this ultraviolet light that we get from the sun, this blue light we get from the sun, turns out have two different physiological mechanisms that profoundly influence human health and functionality and quality of life.

Turns out light is bioactive in humans, not just plants. Now there is another layer to this story that's really important and actually, before I get there, maybe I'll mention there are there are different components of light.

So ultraviolet light, blue light, there's parts of the visible spectrum that are still there. So the other colors of the rainbow, that's when we see a rainbow.

How Light Affects Human Health

That's literally the light spectrum from the sun being split into the different colors, separated, so that we can see them as different colors. But all of those colors exist in sunlight.

So those colors, ROYGBIV, red, orange, yellow, green, blue, indigo, violet. Many of those colors are bioactive. So the violet is like ultraviolet The blue influences, the circadian rhythm.

The some of those other colors also are bioactive and especially the red part of that spectrum. Now, as we get out of that, if you want to do a Google search for the electromagnetic spectrum, there's also parts of the spectrum that the human visual system is not evolved to see.

Some of those parts of the spectrum are bioactive to X-rays, for example, are on that spectrum are gamma rays. Those are bioactive parts of the electromagnetic spectrum, not in a good way.

They will they will damage your body and cause DNA damage if you get too much of them. Also, things like radio waves are on that spectrum, not bioactive.

And a part of the spectrum is the infrared part of the spectrum, which is invisible to the human eye outside of that visible spectrum, and is largely bioactive.

So we can go into an infrared sauna, heats us up, we get we go into the sunlight and those infrared rays, the mid far infrared energy gets absorbed at the layer of the skin and just below it in water in our cells and heats up those cells that's also bioactive, stimulates sweating, causes heat responses in our body.

There's a whole science to that. But in this part of the spectrum called the red and near-infrared part of the spectrum, there's a special kind of magic going on science, I should say, rather than magic.

But it seems like magic. So that this part of the spectrum uniquely penetrates into our body. So if you were a kid and you held up, you ever played with a flashlight at night and you held that flashlight up to your skin?

What you'll notice it like up to your fingers or your hands, or especially where your fingernails are. What you'll notice is that the light that comes out the other side is predominantly red.

It's not like the white or yellow light of the flashlight. It gets shifted to a red color. And the reason why is because it's specific. Most of the other parts of the light spectrum get absorbed in the very surface layers of the skin.

That red and near-infrared light penetrate deeply into our bodies up to a two or two and a half inches deep into our body. And this would just be kind of a random fact that that exists if that type of light was benign and didn't affect human physiology at all would just be sort of a random factoid that, hey, this spectrum of light penetrates deeply into the human body.

It doesn't seem to do anything. But, you know, that's what it does. But it turns out that's not the case. It turns out that this part of the light spectrum that penetrates deeply into the body is also bioactive, much like ultraviolet light, much like blue light, highly, highly bioactive influences what your cells are doing and causes chemical reactions inside of your cells that profoundly influence human physiology.

So it's not just a trivia ability that this red and you're infrared light for hundreds of thousands of years has from the sun has been penetrating deeply into the tissues of the human body.

The human body evolved the capacity to utilize those photons of light to serve positive functions, to not just let them pass through, but to do something positive with them.

The human body is, if nothing else, a highly efficient machine. It doesn't let energy go and waste it. And what those photons do, it turns out, is they do a few things.

One is they they well, maybe I'll keep it broad for now and then we'll delve into the specifics, because I've been talking for a while now. So what I'll say here to wrap up this first part is we need to understand, number one, light is bioactive, and the right way to think about it is not just light.

Is this thing. Yeah, it's light outside. We can see, we can function in light as the absence of darkness sort of thing. But the right way to think about it is to think of light in the same way we think of food nutrients that there are different nutrients of light and that the human body has a need as a requirement to get adequate amounts of the different light nutrients in the same way that there are essential nutrients with with nutrition, that we have to get certain quantities of certain nutrients in the food we eat.

The human body also requires certain light nutrients, insufficient quantities and the right nutrients in sufficient quantities. In order for us to express health, they are a requirement for human health just as much as nutrition.

The right nutrition is a requirement for human health. So you've you've very clearly explained that the sun and the light that we get from the sun is absolutely critical to our health and well-being.

So it's probably the biggest mistake ever to be inside 24 seven and not be exposed to the sun. It's not just a matter of letting light come in your windows and seeing light come through the eyes, but it's a matter of the sun being on our skin.

And I would also venture to say that being drenched in sunscreen from the moment you walk out of your house is probably not a great idea either. And we do live in a culture where now we demonize the sun and we say the sun causes disease and causes aging and causes, you know, melanoma and wrinkles and all these things.

And you and I both know that there's a lot more to the aging of the inside of the body, that that has the outside of effect of wrinkles and melanoma and all the skin issues.

So here we here we've established the importance of light. There's a lot embedded into that little 30 seconds of what you just said there, too. I mean, we could talk just for an hour on the things you said in that 30 seconds alone.

Yes. Yeah, go ahead. But talking heads have us believe that the sun is bad. So let's just leave that there and say it's not true. Okay. So now that we've established how important this is, could you talk about how it works?

What are the mechanisms of action in the body? And then we'll get into talking about this red light unit that's actually right behind me here that you see.

We'll talk about that. We'll show it. We'll show how it operates. But first, unpack how how this works, what's happening inside the body when I go out in the sun or when I stand in front of this red light.

Right. So let me maybe briefly say on what you said there, that UV light is the main one that is the most controversial one and and UV as ultraviolet light.

That's the one that is the most that's controversial territory, the mix of science. I'll do this very briefly. There's a mix of science of, you know, you talk to dermatologists there like it causes skin aging, it causes skin cancer.

You got to avoid ultraviolet light. You got to, as you said, go out slathered in sunscreen at all time. Don't get that sun on your skin because it's going to cause DNA damage and drive all these the skin aging and skin cancer.

That's the controversial one, because it turns out we also need the UV light for the synthesis of vitamin D. So what they would have you believe is that you should avoid the sun and you should instead that the only benefits of sun are vitamin D specifically, and that of the way to then solve this problem is avoid the sun, but take a vitamin D supplement.

Okay. It turns out this is totally wrong for a number of reasons that we, as you said, don't have time to get into. The very brief version of it is the sun is decidedly associated with good health.

Are studies looking at all cause mortality risk of dying from any cause that show that and this was particularly research out of Sweden on get I think close to 40,000 women who were examined over close to three decades and they showed that sun avoidance was as big of a risk factor for early death as smoking a pack of cigarets per day.

Okay, so even if it's true that certain and let's be as charitable as possible and Steelman that argument even if it's true that huge amounts of sun exposure do accelerate skin aging or do increase your odds of specific types of cancer, it's also true they lower your risk of many over a dozen types of other cancer that are more lethal and lower your risk of dozens of other diseases.

The main killers that kill us things like heart disease and diabetes and obesity and neurological disease. So and autoimmune disease. So when we the right way to look at it is in the context of all cause mortality.

And we know that higher amounts of sun exposure are hugely beneficial to health and reduce all cause mortality or risk of dying from any cause. Let's leave that aside for now and go back to red light and near-infrared light, which is much less controversial than ultraviolet light and say, how does it work?

Well, there you know, maybe actually I'll mention first, there are many, many benefits. There's over 6000 studies now on the topic of red in your infrared light showing that it benefits everything from fighting skin aging.

So it actually opposes the effects of ultraviolet light on skin aging and increasing collagen production production, making your skin more useful, speeding wound healing from all kinds of wounds, whether skin wounds, whether diabetic ulcers, whether it's cuts and scrapes, bone fractures, tendon injuries, all sorts of of injuries.

It's speeds healing typically on average by about half so or by about double, I should say. It speeds healing by about double. It costs cuts the healing time by about half.

For example, an athletes who sprain an ankle they get on the field back on the field and half the time it lowers chronic inflammation. It combats mood disorders like anxiety and depression.

It combats neurological diseases. It combats autoimmune diseases like hypothyroidism. It increases fertility, it decreases pain, it combats arthritis, it combats hair loss.

It enhances exercise performance. It speeds up recovery from exercise after exercise. It enhances the adaptations to exercise, whether we're talking about endurance or strength or fat loss or hormonal metabolic adaptations, it increases energy levels, a whole long list of things.

And this is not even to go into all the specific medical conditions where it's been tested for, like there's dozens, if not hundreds of studies on minimizing side effects of chemotherapy drugs in the context of cancer, for example.

So even leaving that aside, even stuff that's relevant to the general population, like combating hair loss, decreasing skin aging, making your skin more useful, improving your body composition, lowering fat, making you more muscular, enhancing adaptations to exercise, improving energy levels, decreasing pain you, improving joint health, improving recovery from exercise, enhancing sports performance.

Mechanisms of Red and Near-Infrared Light

This list almost sounds silly to most people because you would think like, how could one intervention, one thing possibly affect all of these different systems of the body as we're all used to thinking about, like, oh, I take this drug and this drug does this one highly targeted thing in this one system of the body.

So when we start when I start listing off all these different systems of the body in different, seemingly totally separate types of things, it sounds like snake oil.

It's like it sounds like how could something possibly have all of these benefits? This sounds like B. S.. Well, the reason that it does and this now loops back into your question, which is mechanism.

And the only way that something can possibly have so many benefits in so many different systems of the body is if there are some kind of universal mechanisms of benefit across the board in different types of human cells.

And that is, in fact, exactly what's going on with red in near-infrared light. It's sort of analogous to saying, well, how could nutrition possibly, you know, reduce your risk of dementia and reduce your risk of heart disease and improve your sports performance?

And it combat depression and, you know, enhance your recovery from exercise and improve your sleep and fight inflammation. How could it possibly do all those things?

How could meditation possibly do have all these benefits at the brain level and reducing your risk of all these different diseases? How could exercise possibly fight all these different diseases and totally different parts of the body?

Right. It's the same principle. And there's no question nobody argues that. Nobody argues that good nutrition solves all these problems. Nobody argues that exercise solves all these problems.

But there is all this like, well, this seems kind of fringy and weird. Why would you know It? I mean, think of it like nutrition. Exactly. It's exactly right.

So we're providing essentially nutrients, inputs into the biological system that are necessary for the whole system to function better. Same as nutrition, same as exercise, same as sleep.

That's how all of those things work. They increase the functionality and the health of basically all the systems of the body, not just one little mechanism in one specific system.

So how does it do that for a long time? Read in your infrared light. The the main theorized mechanism of how it worked was that these photons of light went into the cells, into the mitochondria and hit a photo acceptor like a, like a receptor for photons of light called cytochrome C oxidase and that this enhanced energy production by the cells.

And it's true that this mechanism does exist it's well researched, it's well-established. This does exist. So many people thought, well, it, it enhances ATP production, cellular energy production and that, you know, makes the cell work better.

And of course, there's an element of truth to that. Cells do their jobs well to the extent that there is enough energy supply for them to do their their jobs well.

And if there's a deficit in energy supply, those cells, whether they're brain cells or heart cells or muscle cells or whatever, cells, thyroid gland cells, they don't function as well when there is a deficit of energy supply.

So this red and near-infrared light goes into the mitochondria. And it what it does is basically there's a part of the mitochondria that needs oxygen to be bound there for it to facilitate energy production.

Sometimes there's another compound called nitric oxide that gets in there and essentially blocks it. It plugs up that area where the oxygen should be bound.

And when nitric oxide is there, it's blocking the flow of energy, rather near-infrared light essentially, but out the nitric oxide and allow oxygen to come back in and facilitates energy production.

So again, just to emphasize, light is bioactive in your cells, photons of light from the sun or from red, and your infrared light devices penetrate below your skin, go into your cells, into your mitochondria.

Those photons interact with little microscopic components of your mitochondria to facilitate cellular energy production. Light makes your cells produce more energy.

So that's a pretty remarkable thing to wrap your head around. Well, yeah. Especially since most people here viewing a lack of energy is a universal complaint.

I mean, most people watching health summits or or participating in health projects, low energy is one of the many symptoms that brought them here, because their energy isn't like it was when they were eight years old, right?

Yes. So. All right. I love in the in the next 5 minutes that we have on this first part of our talk, because we're going to break this into two parts because, you know, you and I can always go for like an hour and a half.

So we're going to we're going to compact all this information into the first hour, and then we're going to keep going. But what I'd love to do is I'd love to demonstrate this behind me when we get into the second half of our talk.

I also want to help people understand what they should be looking for in a unit, because these days it's become so mainstream, it's become so popular red light.

I mean, like you mentioned, elite athletes are using it for recovery. And you turn on any health podcast these days or you follow any famous biohacker these days.

And red light is being discussed. So there are the ins and outs of red light devices. Some of them are absolute garbage and junk. And I say that with like, I'm just going to come out and say it.

There's a lot of junk out there, so you're going to help us understand what to look for. But real quick, could you talk about like I'm going to jump up and and go stand on these red lights and demonstrate them?

And full disclosure, I should be naked while we're doing this. But I'm not because, you know, this is G-rated. And we we'd have the most popular summit of all time if I do it right, make if I'm not going to do that.

But here we go. So you can see now that I move that I've got two lights here. And so also talk about why I have two lights. So if you could guide me through this, the guide our audience through this as if they know nothing about what to do here.

Yeah. Okay. So first of all, the main source of red and near-infrared light historically has been, as I said, from the sun. Now, one of the issues for modern humans is we spend well in sun, so we have if light ends of we the efficiency in red and near-infrared light exposure, modern technology comes to the rescue.

We have a solution which is we can now put thanks to LED technology, we can now put red and near infrared lights in our home to help correct this deficiency.

And it's super easy and painless. Basically, you get one or two of the types of devices that Laura has behind her. You flip the switch to turn them on and you put different parts of your body or your whole body in front of those lights for something like.

Typically the session will last between five and 20 minutes. Where we wait. So I could get all that benefit with Honestly, let's just cut that time in half and say 10 minutes a day.

10 minutes a day. Yes. And I can. All those symptoms and all those health conditions that you just listed that can help me in 10 minutes, that's a lot easier than preparing healthy food and food as medicine.

I'm telling you, I'm not saying stuff. Yeah, no, but let's caution people, this is not a replacement for eating a healthy diet or exercising or something, but it's something that Synergize is with them and is an additional, you know, aspect, important aspect of health.

But this this light story, these the aspect of different light nutrients. And you can think of it as us having, you know, just is there such a thing as malnutrition, which happens when you don't have adequate doses of the the the nutrients that you're supposed to get in your diet?

We can have mal illumination, which is a deficiency or toxicity of certain light nutrients that were exposed to. And we have a massive epidemic of mal illumination in terms of deficiency and red your infrared light exposure and this is a key piece of the story of health and longevity and disease prevention that's just that hasn't been incorporated into our modern paradigm.

You know, we talk about, oh, diet and exercise and sleep and stress management, but most people are leaving out the light part of the story. And it's hugely important.

It's just it's a matter of paradigms that we haven't incorporated the story of light and human health into our way of thinking. But again, we have it's not a deficit of science.

There's over 6000 studies that exist on this topic. And we know this is profoundly beneficial for your health, for all these different these different things that I've mentioned before, you know, combating skin aging, combating hair loss, speeding up healing, combating pain, enhancing sports, performance enhancing recovery and fat loss, muscle gain, you know, on and on and on.

This list goes on to many different conditions combating chronic inflammation. And maybe I'll just mention briefly one other key layer or maybe two other key layers of how this works and the universal mechanisms.

In the interest of time, I'll be very succinct. One of the other key layers is essentially what this does is it modulates gene expression in a way where it suppresses chronic inflammation.

The expression of genes related to chronic inflammation, and instead it upregulates. It increases the expression of

genes involved in healing and regeneration and growth of those tissues.

So if you were going to reduce down and this is actually much more important than the layer of the story of enhancing cellular energy production, what it really does is in a prolonged way, not just while you're using the light, but for hours.

And even some studies show days afterwards it magic relates gene expression in the cells that were exposed to upregulate growth and regeneration factors of those tissues.

So this differs depending on the specific tissue that it's exposed to. But when you expose it to your muscles or bones, for example, it upregulate IGF one insulin like growth factor one and growth factors in bones.

It upregulates in the brain by NF and NGF nerve growth factor and brain derived neurotrophic factor in other tissues like the thyroid gland. It upregulates the local growth factors in that tissue and regeneration factors it in the skin it it increases fibroblasts production of collagen.

So this is why it has a youthful promoting effect in your skin. It's produ it's actually increasing collagen production. So and then in wounds obviously that you can see in terms of wound and injury healing.

For example, I injured my hamstring a few weeks ago playing tennis and my Achilles. I've been using I've been using that light on those tissues to to increase wound healing of those of those injuries.

I use it after exercise to speed my recovery and enhance regeneration and healing of those tissues that were slightly damaged during exercise. And it does this again by actually altering gene expression in those tissues to increase growth factors and regeneration factors.

And one thing I'll mention is it's important to understand that this works with your biology, so it doesn't just do so in an unregulated way. We're just ramps.

The more light you get, the more it ramps up. These growth factors in an uncontrolled way. It's working with your biology to allow for the optimal amount of growth and regeneration factors to be expressed to facilitate healing.

It's not just like injecting steroids or something like that where it's going to cause all sorts of dysregulation.

Using the Red Light Panel

It works with your the way your biology in the way your genes are designed to express optimally to facilitate optimal expression. And maybe one other layer to the story that I'll add, well, I'll let you jump in, Laura.

I don't want to go on too much with mechanisms. We're going to keep going on mechanism. We will. I want to talk really quick in this first half because we're out of time for this.

I just want to talk about this particular unit behind me is from Read Therapy CO. You actually had a hand in developing this when the owner yeah. When the owner of the company decided I mean, he has this personal story of, you know, red light changed his life and he decided this is what he's going to do for the rest of his life as he's going to he's going to get these into the hands of everyone he can.

And so he actually came to you and he said, Hey, Ari, as the author of the bestselling book of all time on Red Light Therapy, if I were to create a unit that had every specification that you would love to have, that's what this is.

So you actually helped create this unit. So what I want to share with our audience. I've done, I've helped create and been a consultant for the creation of multiple iterations of this device for five years now, actually.

Yeah. So this one behind me is the 840, the Red Rush, 840 Pulse. And we're going to get into why pulsing is important. We're going to get into what all of this means.

We're going get into what's the difference in standing in front of one versus two. So because if people can only afford one, that's okay too. You get a different thing going on in your body when you're standing in front of two.

So so this company is is available for this unit is available for everyone viewing it. So if you go to RedTherapy.co/SK2024 stands for Silent Killers.

Also there's a clickable link on the page where you're watching this video. If you just go to the read therapy co link, you can get this summit. Viewers can get between 119 to $414 off the purchase of a device, depending on which model you choose.

And the discounts will be automatically calculated at checkout. And all you need to do is use the code SK2024. That's for Silent Killers 2024 And again the website is www. RedTherapy.co/SK2024 So we're going to we're going to talk a lot more about this.

And Ari, I want to thank you so much for joining us today for this talk on red light therapy to our audience. I hope you're finding our conversation insightful, helpful in this next half here.

We're really going to go into the ins and outs of, you know, what you're looking for in a device and what you should avoid. And and we'll get deeper into the the biology as well, because we're all we can always go deeper.

So if you're a summit purchaser, stay right here, because we're about to dove even deeper into this discussion. If you're not, click on the button on this page to get access to a continuation of this conversation and many others, and get the tools you really need to reclaim your health.

If you're watching this continuation of my talk with Ari Whitten on red therapy, thank you for being a valuable member of our community. We're going to dove right back in.

So, Ari, picking up where we left off, I want to I want to spend time going deeper into why this is important to our physiology, the biology. But before that, let's just talk about what makes a unit good versus bad and why this unit behind me is unique.

Because you said you've you've been instrumental in the development of this particular device for the last five years. There's a lot of red light companies out there, a lot.

And you can go on Amazon and you can get something rather inexpensive to put on your face for anti-aging, for example, by the way, I am at the time of filming this, I'm about to turn 51 years old and I used this because I want to keep my collagen and I want my face and my skin to stay youthful.

So tell us about the ins and outs of what's good, what's bad when you're buying a unit. I'd also like to let people know I'm about to turn 167 years old and this is how good it.

No, I'm just kidding. So that's the power of red light. I wish that would be nice if it was that powerful. Okay, so little interesting background. As you mentioned at the beginning of this, I was one of the first people to sort of really get deep this topic way before it sort of became popular.

Actually, my book is a big part of the reason it became popular. I recently reached out to dozens of companies that produce these lights. Now to them, submit their lights to a third party, a very good one of the few light labs in the world that does third party testing on the light output of these different devices, which I'm going to publish that that data soon.

But so I'm currently the only person in the world with actually the third party lab data to know actual light output of all the different lights from the major manufacturers and the market hasn't.

It's in my private possession right now, but I'll make it public soon and what I was going to say is that, you know, my I got into this. So when I reached out to these companies in probably half of them told me, okay, oh, sorry.

Yeah, I know you. You're the reason I started this company. Like half of the companies in existence that produce these lights now literally started their companies because of my book.

Well, that's just if that isn't the definition of a ripple effect, I don't know what is. So here it was this fringy topic like light. What do you mean? Light is like a vitamin.

What do you mean? Light is like a nutrient for your health. And you really helped this come mainstream. I mean, so listen, I just want to acknowledge that for a moment, because your ripple effect, your reach is far.

If you never did another single thing in your life, you've left your legacy, what your mark on this planet and on our generation of health seekers. So yeah, I know you've got a lot more cooking.

You're never going to stop. So totally, totally. So, you know, I'm and I'm not the world's foremost scientific experts on this topic from an academic or clinician or researcher perspective.

There are you know, Michael Hamblin is is a Harvard researcher who has written actual medical textbooks on this subject. I have one right next to me. I could go grab it.

Let me grab it real quick. So, like, this is the handbook of photo medicine right here. But this is an actual medical textbook. So there were people who before me wrote books on this topic, mostly actual research scientists I just happened to have been on the leading edge of, you know, kind of early on of being aware of the science on this topic.

And I happened to write the first book and the first really good book that was accessible for the general public that wasn't a textbook only for clinicians and researchers.

That's way too dense and way too scientific for the average person. So I just synthesized a large body of research and communicated it in simple enough ways for the general public to understand and said, Here's the benefits.

Let's break all this complexity down. Here's the benefits, here's here's the main mechanisms of how it works. Well, I just point out that I don't have that textbook in my office.

I have a lot of books, but I have this with all the tabs, because I will tell you that even academics and practitioners, we appreciate information when it's easy to understand.

If I don't have to spend, you know, hours and hours and hours of my life trying to decipher that textbook and I can get it all in a quick read. I'm appreciative of that.

So yeah, me too. Me too. I mean, it took me years to synthesize this. So the funny story is that I wanted to say that I started doing this before any of these companies existed.

So the way I had to go about even getting a light for my own personal, it's pretty funny. I reached out to a marijuana growing light company that was producing LED lights because because nobody was selling LED lights for for red light therapy.

So I basically reached out to this marijuana grow light company that I found online and said, Hey, can you make me a custom version of the lights you're producing in the same case, same power, same electrical components?

Can you just switch the LEDs so that instead of all this, you know, these different colors and UV and blue and green and orange and all this stuff, just make it all this one wavelength of red light at 660 nanometers.

I thought it was a pretty weird request, but he said, sure. And so he sent me this light and then I started sending him other people, people who were in my programs and were coaching clients, having them order these lights.

So the guy started getting dozens and dozens of orders for these lights. And eventually, after like six months, he

sold maybe over a couple hundred thousand dollars of these lights.

He's like, Can I just ask you, why are all these people ordering these weird custom lights for me? Like, I don't even understand why these people are ordering.

Like, he didn't know anything about why the guy actually went on to now he funds one of the he has one of the major companies that sells these lights.

Out of all these stories you've told me, this is my favorite story. I have never heard you want a story like this? I don't think. So. So this was the first red light device in the market was these custom ones that I was ordering for from a red light company.

Choosing a Quality Device

I mean, the first LED based ones previously, there were laser devices on the market that had been used for two decades by clinicians, by physical therapists and and chiropractors.

And they're often called cold lasers. And this was the same principle read in near-infrared light. The problem was these devices were ten, 20, $40,000.

And so they were inaccessible for home use. So they were only being used in a clinical setting. The game changer was when led technology came into existence and you could have LED panels like the kind that are behind you.

And now the same technology red the near-infrared light became accessible to the average person for 500 to 1000 bucks instead of 10,000 or 20,000 or 40,000 bucks.

So that was a game. Even well, even the first iteration of red lights that were available for home use were crazy expensive. I can remember looking at panels going, I don't have $3,000 to spend on a light that's only, you know, four feet tall.

Right? Right. So totally. So there. Now, having said that, since the beginning of of people starting to make these devices, the market has been flooded with all kinds of cheap devices, lots of people and companies from China trying to cash in on this trend by selling these super cheap devices all over Amazon.

Just simple led panels, face masks, every every gimmicky thing you can imagine, which also kind of gives the whole space kind of a bad name and makes it look silly and pseudoscience.

But the thing that's important to understand is just like with something like vitamin C or vitamin, like any other essential nutrient, it has to be in the right dosage.

You can't just be like, Yeah, vitamin C is important. Therefore, take this vitamin C pill that I'm selling with, one milligram of vitamin C per pill. Okay?

There's a big difference between that one milligram of vitamin C versus 250 milligrams. Right. One is going to do nothing for you. One is going to do something for you.

The same is true with exercise. So like saying exercise is important. Now go do one rep of body weight squat or go do a 45 minute proper workout or. My favorite, just go walk 20 minutes a day.

That is not right. Oh, right. So the the dose and intensity matters hugely. The same is true with light and what this means is that all these cheap devices, many of them are like tiny amounts of wattage and tiny amounts of overall light output, don't do anything, you know, you can just because it emits some visible light doesn't mean it's doing anything.

You have to it has to be of a sufficient intensity and dose to actually acquire those benefits. And that dose has been

quantified. So we know the dosage range.

It's measured in something called joules and the intensity of the light output. Irradiance is measured in something called milliwatts per centimeter squared.

So all of that science is well-defined. We know the light has to be of a sufficient intensity of milliwatts per centimeter squared to have benefits, and the total time combined with that intensity of light, combined with the total amount of light output from that device, determines the dose.

And that dose has to be in a proper range to get these bioactive effects the same as any light nutrient, the same as exercise, the same as you know and any other thing.

Like if you say, hey, meditate for 3 seconds, you're probably not going to get any benefit for meditation. But if you say meditate for 10 minutes to 20 minutes now we're in the dosage range where you're going to get some benefits.

So the same is true of light, and that's the problem with a lot of these cheap devices on the market. They just are not going to get you to the proper dosage range.

They don't have the proper light intensity output to have these bioactive effects, these benefits on the systems of your body. So it's very important to basically the way this breaks down is get a device from a highly reputable manufacturer.

Obviously, me being a consultant for the company for for for red therapy CO, which are the company that you're of, the lights that you have behind you.

You know, I've had a hand in actually designing those lights according to my specifications. Obviously, I think that they're the best on the market. So that's what I would encourage people to do. There are a handful of other companies that also make high quality lights as well.

So you know that the quality of the overall market has increased a lot. But those lights would be my go to lights. The one behind you. And they're highly cost effective.

They happen to be one of the cheaper ones on the market as well relative to the size and the light output of the devices. So the way this breaks down very simply is you once you get a quality light and you're not dealing with a junky, cheap light, you have one of these quality lights from a manufacturer.

What you do is two things. You get the biggest one you can afford, ideally full body panels. So you cover the majority of your body at the same time and you get that.

That's going to be the most time efficient. You're going to get the most of your body in the shortest time possible. If you use two lights at the same time, you can do the front and back of your body at the same time.

So instead of doing 10 minutes on the front and then having to turn around and do 10 minutes on the back, you do both of them simultaneously and you do the whole the full body in 10 minutes as opposed to 20 minutes.

So this is really important. So this is all about efficiency with two panels, so you don't have to have two panels. It's just going to take you longer to treat full body.

In my life, it's all about efficiency and it's all about what I can have at stake as well. So when I'm in front of my lights, I'm probably doing three other things the same time.

I'm no joke and you know, that's a talk for another day. But for me, it's about speed. It's about speed because I'm so busy. It's a great point. I mean, you can you can sit or stand between your lights.

I mean, you could sit and meditate while you're doing your light exposure, which is something I often do. You could

do breathing routines. You could read a book if you want to read.

That's a great time to read. You could listen to a podcast. You can you can use that time productively. You could be on on a business call. You know, there's lots of things you can be doing during that time.

You don't have to have your full attention on the red light therapy. You just to plop yourself in front of it. And that's basically all this is. You get a quality device, the biggest one you can afford to treat as much of your body at a given time and you plop yourself in front of it or the specific part of your body you're trying to treat.

And you're going to be there for somewhere between 5 to 20 minutes, depending on exactly what your treatment goal is. Yep. And it's not easy. That's it.

So simple. I have to say that we have a lot of devices in my house that do a lot different things. This is the most popular for my family. My daughter is a is an athlete.

She does competitive cheer and my husband is a landscape contractor and he does hard physical manual labor. Still to this day, he gets in there with his crew and nobody works harder and faster than he does.

And so both of them in 10 minutes, like when they're they at the end of the day, when they're like when they're complaining about how they feel. My eyes.

Did you go sit in front of the red light for 10 minutes today? Did you go know? Okay, could you please go do that? And then and then you can stop complaining.

And the way that I handle this, by the way, I have found a cool hack with this. So these are a little bit taller, right? So they stand up off the ground by like two feet.

I put a big giant balance ball, one of those yoga balls. So I'll stand full body and then partway through it, oftentimes I'll just sit on the balance ball and and that's comfortable right.

It's comfortable. And the other thing I want to say is you mentioned that you can read. You can I like the light to go right into my eyes. I don't want to cover my eyes.

They come with like little goggles. But actually it's not dangerous for red light to go into your eyes. And I actually want my eyes to be bathed with red light so I will sit and read while I'm in front of this.

Yeah, I'm among the almost innumerable different benefits of this. It has also been used in eye conditions. There was a study that just came out maybe about a year ago now that was shown that it was it it combatted age related macular degeneration.

There's also many studies in the context of treating myopia that shows it's beneficial for for people and kids who have myopia, nearsightedness, which is becoming quickly becoming an epidemic due to all of the screen use.

Kids are growing up it screen use not spending time outdoors so it actually affects the physical length of the eye from front to back and how fast it's growing, which influences vision at different distances and is making causing an epidemic of myopia.

Turns out red light also combats that so beneficial for vision, beneficial for normal eye growth and eye development in kids as well. So can you talk I'm so glad we unpack this because people are afraid.

They think they need to cover their eyes. But can you talk a little bit about the pulsing so this particular unit pulses and there is a scientific importance to pulsing?

Yeah. So one of the things that I recommended the Eric the owner of red light therapy of red therapy CO to do a couple of years ago was to be the first light device on the market that incorporated a pulsing feature into this and

which he's done in those lights behind you do that and the reason why is the this in the literature this is termed something this is termed pulsed wave versus continuous.

This wave of light is emitted in waves and the continuous wave is a steady stream of light. Pulsed is flickering on and off. And it turns out that there's a sizable body of literature that now exists that has shown that pulsed wave light.

When it flickers on and off, it's more effective than continuous wave. It's not known exactly why this is. I always think from an evolutionary perspective, I always think of like walking through a forest and getting light on your body through the trees of the forests in a way where you're kind of getting light, not getting like getting light, not getting light.

You know, it's flickering back and forth. I don't know if I'm right to think that way, but that's that's what makes sense to me. That's the only explanation I can think of, of like sort of a natural reason why it would be the case that pulsed is superior.

But we do know it's superior. And in terms of the cellular physiology, there's there's an element where maybe I'll explain it this way first. So the there's dose matters.

And if you overdo the dose, as with anything, you start to get you start to cancel out the benefits and you start to get you neutralize the effect. You get at low doses or moderate doses.

You get what's called bio stimulation, you stimulate beneficial effects. And when you overdo the dose massively, you get what's called bio inhibition.

You inhibit those same things that were stimulated at lower doses. So think of it as in terms of exercise, if you were to massively overdo exercise as you're not getting benefits from that exercise anymore, you're just creating harm.

The same is true with red in your infrared light exposure, although it's much safer than exercise, you're much less likely to cause harm than compared to overdoing exercise.

But it's still possible if you were to overdo it. So you get this bio inhibition. I think if you massively flood the system with just too much, it creates maybe even more of inhibition and the pulsed feature creates more of a stimulation.

So question I have a question. So I notice in myself when I get in front of my red lights or when I get between them and imagine I'm naked, I'm sitting there on my ball and I'm reading my whatever I'm reading and I'm doing all my habit, you know, habits at once, my good habits at once.

I find myself wanting to go ten more minutes, ten more minutes, ten more minutes, because I feel so good when I'm in it might like I don't know how to explain it, but it's a feeling of peace.

It's a feeling of joy. It's like your body. Once you get in it, you crave it. And I sit here and I look at my the time, I'm like, Shoot, I got to be accountable.

I got to go get on an interview or a meeting or whatever. So how long can I stretch this? How much more time can I squeeze out of this? I don't want to leave once I start.

So how much is too much with this particular type of unit. Yeah, it's a great question. I once had a conversation with with this guy, Michael Hamlin at Harvard Researcher.

He's the most prolific researcher in the field. He's done over 1400 studies.

Pulsing, Dosage, and Treatment Protocols

Maybe that's outdated by now. So that was a few years ago. Maybe it's 2000 now. Who knows? But I talked to him

about this exact issue and interested. I was surprised by his response because he sort of almost brushed off the concern of overdoing it.

I was surprised at his lack of caution around, you know, overdoing it. And so he was like, yeah, you know, it's basically it was a sort of response. It was like, it's pretty hard to overdo it.

You know, you can there's a very big safe range and you can really do a lot while still creating benefits before you get into the range of creating harm.

I don't know if he would still say that because that was a few years ago. I tend to be more cautious in my assessment and there's a reason why, which is that he's a researcher in like clinical research and I've dealt with many coaching clients who are actually using this, many of whom have, in some cases, severe chronic fatigue or other chronic, complex illness.

And I have seen cases where people are extremely sensitive to light wear, and it's typically people with severe chronic illness who are the same people who are extremely intolerant to exercise, who could do 3 minutes of exercise and be wiped out for three days.

That demographic of people tends to also be relatively intolerant to light exposure, and they absolutely can overdo it. And in those cases, they they can be very fatigued.

What happens is basically you get a severe fatigue from it. So with healthy people, otherwise healthy people, it tends to be very hard to overdo it. Still, I'm sure possible.

As with anything, you can overdo water, you can overdo food, you can overdo sleep, you know, you can overdo laying in a bed. You know, if you there's studies showing that bed rest laying in a bed, if you do seven days of it, you can get noticeable reductions in bone density and loss of muscle.

Everything can be overdone. And there's no question that applies here, too. So the but it has a very large safe range, especially for relatively healthy people.

If you are severely, chronically ill. What I'd recommend is starting with like 30 seconds to a minute and then slowly building up from there to make sure that you don't overdo it.

Because if you are if you are severely, chronically ill and you start with like, okay, I'm going to do a 20 minute session, it might cause severe fatigue for two days, but if you start with a minute and you build up from there, you'll be fine.

And you're giving your body also time to to make adaptations to get to your microdosing. So I, I clearly I can handle this for an hour. I have been known to keep hitting the reset button for an hour straight, and I'm deep in a novel and I'm feeling good and it's warm and I love it.

And I'm kind of holding off a little. I have a really busy day ahead of me, and if I can avoid that for another few minutes, so I get kind of addicted to it is what I'm trying to say.

Could you? I would say that you're probably overdoing it and you're clearly not noticing any negative effect. So it's not like, you know, that just goes to show how safe this is.

Yeah, but I would say that it's likely that you would get a better effect by backing down to closer to half an hour. Yeah, that's usually all I have time for.

So there are occasions when I go an hour, it happens, just like we overindulge all the time. There's sometimes that I eat too much cake. I mean. There you go.

Okay. So could you talk about what's the word I'm looking for so people can use this for different health goals? So

there's there's almost like treatment protocols.

That's what I'm trying to say. Can you talk about protocols? So you just talked about a protocol on if you have severe chronic fatigue syndrome. Your protocol is too micro dose and build yourself up.

What is the protocol? If you you know, you can handle 10 minutes and. You're working on a heavy metal detox or you're working on a parasite cleanse or you're, you know, you're working towards or you're using it as an athlete to recover or you're not an athlete.

You're 65 years old and you're working out and you're feeling like the normal pain when after you work out what is a protocol that people should use. Yeah.

So first of all, I would say like what is, what is your goal? What like are you using this to treat an injury? I have a few specific devices that I use for specific reasons like this is a little mouthpiece that emits red light.

This is a small little laser unit that I use on very like small areas where I get an injury. This is a hair loss cap, laser cap that I use on my head.

So like and but those are very specific things. The majority of what I do is the full body panel that that is behind you. And the truth is that can be used for basically all of these specific purposes.

These are more like niche devices. Maybe it's hard to use that panel inside the mouth, you know, but these are very specific purposes. You almost sit. There.

I mean, you could sit there like this. You can you can you can you can open your mouth. And it actually, because it penetrates deeply, you do get some effect, actually, of that light hitting your gums through your cheeks as well.

So almost all the possible ways that you can use it, you can use that full body panel. That's why that's the single best device to get is the full body led panel.

Now, are you using it for skin anti-aging, for treating surface stuff or for treating like wounds on the surface of your skin, for example? Or are you using it to treat deep tissue stuff like tendon, muscle, inner organs, stuff, more thyroid stuff or brain stuff?

That's the hardest to deliver light to because you've got a skull bone that you have to get through to deliver light and directly into the brain. And for all of those deeper tissues, there's there's two things that are important.

One, maybe a few things. One is near-infrared light more in that 800 to 900 nanometers is better than red light in the 6 to 700 nanometers. Now, the light devices you have behind you have both red and near-infrared built into them. So they have both wavelengths.

Near-Infrared penetrates more deeply into the human body. It's invisible to the human visual system. You'd need night vision goggles to see it. It blind you if you put night vision goggles on to see it and looked at one of those lights with just the near infrared on so it'd be invisible to your visual system without the goggles.

But you put the night vision goggles on and it would blind you. Actually, I just want to point out with this particular unit, you can actually set it to only do infrared and you can just right the red.

It's kind of cool. You don't you wonder is doing something because you can't see it but yeah look at it for just that. That's that's exactly right. So that's why I point out that you can't see the human visual, can't see it.

It's not part of the visit. Visible spectrum of light I mentioned earlier there's parts of the electromagnetic spectrum that we haven't evolved to see.

We can't see x rays, gamma rays, we can't see far infrared. We can feel it as heat. There's parts of the ultraviolet

light spectrum we can't see either.

We can see radio waves. There's lots of parts of the spectrum we can't see. Near-Infrared is goes from red and that's the end of the part of the visible spectrum gets in the near infrared.

We can't see that, but they essentially do the same thing. Near-Infrared penetrates more deeply into the body. So for deeper tissues, it's more useful for treating deeper tissue stuff more internal into the body.

You want to use the light more close to your body and for a longer duration because you want to deliver more overall photons to those deeper tissues to account for the fact that a lot of the photons get absorbed in the more surface tissues.

So you want it to be close to you and you want to deliver. You want a longer period of time to deliver more light photons to those deeper tissues for superficial stuff, for skin anti-aging, you want a shorter duration of use and you want the light to be a bit further away from you so that it's really hitting those surface tissues and not penetrating so deeply.

Oh, so fascinating because a lot of the contraptions you can get on Amazon are a face mask that fit, you know, a millimeter or rat directly on your face.

And what I just heard you say is a little bit further back is actually quite beneficial. In it with with powerful light led panels like the one you have there. Yes.

That that's going to be better. It's you can use facial devices closer to you, but they have to be much, much lower power for you to do that. So this is a way the kind of device that you have behind you is the sort of it's like the multi-tool.

It's the it's the switch, the Swiss Army knife of red light devices, because it can be used essentially for everything. There are targeted devices you can get, like the ones I just showed you.

Here's a mouth device, here's a hair loss device, here's a, you know, a brain device. You know, there's a company named VI Light that makes brain specific devices.

There's many other examples, those kind of specific devices. But the kind of light panel you have behind you is the best purchase for almost everybody, because it's the kind that can be used for almost every one of the benefits of this type of technology.

I have another question about dose then as I think about this. So does dose matter or I should say too much time in front of the light? So too much dose, I guess.

Does this matter for infrared and red or is it one or the other? Are They one in the same in terms of you can overdo it. They're essentially one in the same.

You don't need to think about that. I mean, it hasn't really been tested to to determine like is it is it easier to overdo this or that near-infrared penetrates more deeply.

So that's going to influence that depending on where in the body you're measuring it deeper or surface. But for the most part, you don't need to think about that.

What I would think about is if you're trying to do skin anti-aging, you you really want to think about shorter durations of time, 5 to 10 minutes, maybe 15 minutes.

Depends on how far away you are from the light, because the light intensity drops off the further you move away from it. So what we want to think about is five, 10 minutes from about 12 to 24 inches away from the light for for skin anti-aging, for treating deeper tissues, trying to get more light into the deeper tissues.

You want to be closer to it. You could potentially be right up against it or six inches away and delivering light for a longer period of time, maybe 10 to 20 minutes.

So if you've got an injury or something like that or you're trying to treat one of my favorite uses where I really the main thing that I use it for, I use it for general skin anti-aging.

That's why I look so good at age 100 6703. We know that you're like 15, 20 years younger than me. So there. So the, but the main thing I use it for is after exercise because it enhances not only recovery, it enhances the adaptations to exercise.

So I'll mention like a couple specific studies. Well, I'll mention one specific study where they looked at body mass. They looked at fat mass, they looked at skeletal muscle, they looked at insulin insulin levels and a measure of insulin resistance.

And they compared the group that did an exercise protocol to another group that did the same exercise protocol with the addition of red light therapy after the exercise.

And what they found is that in terms of losing body fat and in terms of improvements in insulin sensitivity and reductions of insulin levels, it essentially doubled, almost doubled the benefits from exercise.

So it synergize with exercise in an amazing way where all the normal benefits of exercise get amplified much more than they would be if you just did the exercise alone.

And that's true of not only helps you recover faster, but it helps enhance the endurance adaptations, it helps enhance the strength adaptations, it helps amplify the fat loss benefits, it helps amplify the muscle gain benefits and it amplifies the hormone effect.

Exercise Recovery and Performance Benefits

So as an example, the exercise only group reduced their insulin levels by 19%, which is a marker of improving insulin sensitivity reductions. Blood sugar.

The group with the red light therapy reduced by 38%, a double double. So reductions in insulin and, insulin resistance by 22% in the exercise only group versus 40% in the group that added red light therapy in terms of fat loss, 6% loss of fat in the exercise only group, 11% almost double in the group that added red light therapy.

So like I that's personally where I love it the most is just after workouts, helps me recover, get my energy back much more quickly and amplifies all the adaptations to exercise.

And I would I mean, I would call you an extreme athlete, Ari. I mean, I know you you you really push your body to the limits. I have a personal story with this, with working out.

You know, I had already been sold on the benefits of read like reading your book, having so many interviews over the years with you, knowing that it was such a an incredible tool for healing and for helping people get through the protocols that we do to help detoxify the body and clear the body of infections.

But then I had a very personal experience with red light that I wasn't expecting. And what happened was I had hired a physical trainer to take me through a more intense workout routine than I'd ever done before.

And I can remember coming home one day after that workout, and I was so much pain the next day because it's always the next day that when I went to sit down on the toilet, I mean, it was one of those moments where you take your hand and you put it on the toilet seat to ease yourself down carefully because everything is screaming at you.

And in that moment I went, Oh, I have a really good tool to help me with this. And went and I stood between my red lights. That day was a ten minute day and I am not joking.

My pain went down what I would call 75%. I was stunned because I'd never since I'd been recommending red light, I had never had a personal experience that profound with pain, because I don't normally have pain in my body.

And I could not believe how that changed everything for me. And so now after I work out, I just come home and I make sure I eat my protein because that's really important after that big workout and I make sure I stand in front of those or between those red lights for at least 10 minutes, because I can always give myself 10 minutes. Totally. Yeah.

And I've split tested this it's hard to split tests precisely as a single individual. You know, it's easier if you're doing a scientific experiment. You have two groups, people.

But I've done this on a number of occasions where I've done a similar workout routine and assessed How sore am I the next day when I don't do the light?

How saw my the next day when I do do the light right after the workout, I would say it cuts the level of soreness by about half, if not more, and it's enhancing the recovery.

I want to talk more about mechanisms, but I know we probably have two to to wrap up. So let me. Give you let me give you in the last moments that we have this time, what are the things that you really want to want our viewers and listeners to hear that we haven't covered so far?

Give us your pearls and take like 5 minutes. Yeah. So, you know, I'm just going to reiterate stuff I've said before. Understand that this like eating a good diet, like eating the right nutrients in the right doses.

It's exactly the same with with light. We need the right light nutrients in the right doses for our physiology to work properly. This is a required diamond.

This is not like some bonus gimmicky thing that works through random, weird ways. Human beings have required, have evolved, require certain nutrients in our diet for our physiology not to function like in some extraordinary way, but just to function normally, to not be dysfunctional.

This is what we're doing with light. Also, it's the same thing. We have evolved to require certain light nutrients, ultraviolet light to get that vitamin D, we get other stuff from ultraviolet light, blue light in the right dosage and timing for our circadian system to to function properly and the right amount of red and near-infrared light into the tissues of our body, on our skin, penetrating through our skin, into our cells, into our mitochondria where it's allowing for for optimal and normal gene expression and healing and function of those cells.

So understand that this is, again, not just some gimmicky pseudo science. See, weird thing, we're providing a type of light that is essential for your physiology to function properly.

There are over 6000 studies that have shown benefits of this in all kinds of context. There's no questioning the science of whether does this really work.

It seems weird, it seems gimmicky. It absolutely works. There is a huge body of scientific evidence to show it works, and it works for all kinds of different things that almost everybody can benefit from.

Are you interested in having more youthful looking skin and anti-aging effects in your skin and stimulating collagen production in your skin to stay younger?

Looking longer, are you interested in enhancing recovery, whether it's from injuries or whether it's from exercise routines? Are you interested in in recovering faster and better and getting back to full function faster?

Are you interested in sleeping better? That's another thing we haven't talked about, but there's a whole bunch of research showing that it's it helps you sleep better.

Are you do you have physical pain problems, joint pain, musculoskeletal pain, fibromyalgia, things like that. It helps combat those things. It helps improve joint health.

It helps improve musculoskeletal. Are you interested in improving hormonal health? Are you interested in reducing chronic inflammation and combating oxidative stress and combating autoimmune issues and immune dysregulation and helping support optimal inflammatory and immune responses?

It does that powerfully. Are you interested in stimulating your mitochondria, to be healthier so you can have more energy. Does that you know, are you interested in combating hair loss?

Are you interested in like me recovering faster from exercise and amplifying all the benefits, the fat loss, muscle gain, endurance, strength, benefits of exercise, right.

Almost whatever issue you've got going on. There's probably evidence showing that red and near-infrared light therapy can be beneficial in that context.

So this is a General. You can think of it if this were a supplement like I like to think of it this way, if if there were a pharmaceutical drug that was capable of doing everything that red and near-infrared light can do for you, you know, if it's something that can fight skin aging and help you lose fat and increase your muscle mass and your strength and your endurance, lower chronic inflammation, improve your mitochondrial health, fight hair loss, speed up wound healing and injury healing, combat autoimmune issues, combat chronic inflammation, improve joint health.

If it could do all of these things and this were a pharmaceutical, this would be like a miracle pill. Your doctor would be like, everybody's got to be on this pill.

This is the most amazing drug ever. Okay. Well, the drug exists. It's just in the form of an LED panel instead of a pharmaceutical. So, you know, we just need to wrap our heads around the idea that something can be profoundly beneficial for our health, even if it's not a drug from a pharmaceutical company.

And that's exactly what this is. This is a profoundly beneficial and helpful general anti-aging tonic that helps support optimal functioning of numerous, many, many different bodily systems.

And if you want at least one of those that I just mentioned, this is absolutely something you should go get yourself get yourself one of these or two of these LED panels and start using it daily or at least three or four times a week.

And you will absolutely notice benefits. Well. There's your might drop right there. I love it when Ari goes on a rant about how important something is.

This has been wonderful as always. Thank you so much. You dropped so much wisdom on our viewers, on our audience summit viewers. You can get this exact same light that you see behind me.

You can click the link on this page that says redtherapy.co You can also go to redtherapy.co/SK2024 and you can get these panels. And the company is generously giving a discount to viewers of this summit.

You can get anywhere from $119 to $414 off the purchase of a device depending on which model you choose. The discounts will be automatically calculated at checkout, and all you need to do is use the code SK2024 and.

Ari, thank you again. And as as always, I'm excited for what you have coming out in the future. You are tireless at research and figuring out ways to optimize human health.

You do have your new project that you're working on. It's going to be a book. It's going to be a program. Human Optimization, where can our audience get a hold of you if they want to receive emails from you, if they want to know what you have coming down the pipeline, if they want to get a copy of this book, which I know you've been saying you're going to put out a new volume.

This was 2018 when this came out, and you keep saying, I got to do the second volume, but. I'm on the verge. I have the third party data. As I show you the slide, I need to do it very soon.

In the next few months. Yes. But the the book you can get on Amazon my websites are theenergyblueprint.com and humanoptimization.com so you can go sign up there be on the newsletter and and get my latest product and program offerings.

So exciting and everyone you should really get on our emailing list at least go and get there and find out what he has coming up. So, Ari, thank you so much.

You're so generous with your time, your love for humanity. I mean, this is what this is all about. Like I already said, you've left for the hugest ripple effect already.

And you and you don't stop. You're tireless. So I thank you for always coming and supporting our project and our audience. It's always a pleasure to interview you.

It is truly an honor to know you and just be a witness to what you're doing. Thank you so much, my friend. It's an absolute pleasure. I always enjoy our conversations. You're a great interviewer.

Thank you so much. Until next time. Take good care, everyone. Bye now.