Introduction to circadian health and artificial light

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other than 30 minutes from the two extremes. You have people at 23 hours and 45 minutes circadian rhythms, and you have the other extreme of 24 hours in 15 minutes.

They are the most extreme genetic mutations of circadian rhythm changes. So I'm sorry to break it to you, but you are not a night person. You have delayed your phase, you have skipped too many sunrises, You've had too much artificial light towards the evening.

And then you're taking and stealing from your stem cell reservoir because you not getting that nitric oxide in the morning. you know, getting super-cosmetic timing.

Then you also stealing your sex hormones. Welcome to the Natural Heart Doctor show. I'm cardiologist Dr. Jack Wolfson. Heart problems don't come from a drug deficiency.

They come root causes where cardiologists never look. On this show, I sit down with experts who challenge the mainstream rhetoric and talk about what actually builds a heart built to last.

Get ready for a dose of cardiac longevity. Greetings everyone, Dr. Jack Wolfson, cardiologist. Welcome to another episode of the natural heart doctor show where we try to give you the best heart health information to support your health and longevity with vitality, vigor, and ultimately just feeling your best.

And today I've got a fantastic guest. And he is the founder of a blue light blocker glasses company. I know he's doing so much more than that and he so steeped in this space and has been doing this for so many years.

His name is Nathan Siles. But before we jump in with you, Nathan, I'll do like an intro. Some studies linking artificial lighting cardiovascular disease.

So 2025 cardiovascular diseases review circadian misalignment linked to endothelial dysfunction, oxidative stress, inflammation, and autonomic imbalance.

JAMA from 2025, higher nighttime light exposure, increased risk of coronary artery disease, heart attack, stroke, or heart failure. with up to a 50% higher heart attack risk and the highest exposure group.

Nature hypertension research, higher blood pressure and abnormal heart rhythms. The higher Heart Rate, American Heart Association artificial light at night linked to inflamed arteries, increased brain stress activity and higher heartbeat disease risk.

Outdoor light exposure, those are the high levels of outdoor light Exposure of a much higher risk, cardiovascular events. So American Journal of Epidemiology, higher blood pressure, hyperlipidemia, diabetes, arthrosclerosis, partivascular mortality.

It's all these different things that increase cardiovascular risk and people with the exposure of the artificial light. With that in mind, I got an expert with me, Nathan Syles, wonderful website, lots of information on their courses, all kinds of cool stuff.

You got great books that you link to that really just allow us to do a super duper deep dive, but you're going to

break it down for us pretty easily. He's the co-founder of BioSpectral Systems.

where he helps people understand how modern light environment affects the eyes, brain, sleep, hormones, mitochondrial function, and long-term health through education and practical products.

Biospectral systems helps restore a more biologically intelligent way of living by reducing harmful artificial light exposure and bringing indoor environments closer to the natural conditions human physiology expects.

As Nathan is going to tell us, he's the two-time cancer survivor, so he does have a lot of skin in the game, including a childhood brain cancer. So he has been researching this for a long time, great information.

He's worked with some of the best people, biggest people in business. With that as an opening salvo, Nathan, welcome to The Natural Heart Doctor Show.

Thank you so much for having me and what an awesome introduction to set the scene about how important lighting is for cardiovascular health.

What artificial light is and why it disrupts biology

Well, I will say this, you know, You are recording outside, which automatically should allow us to trust this guy because I love to record outside. I would right now we're in Arizona and I'm probably a half a mile away from a major freeway, unfortunately.

So it's super loud outside not conducive to an interview, but I'll be in Costa Rica in a week or so, and i will be doing everything outdoors. So Nathan, um, what is artificial light and why is it so dangerous?

Yeah. Awesome question. So to start, we have to understand that the sun emits a full spectrum from ultraviolet around 250 nanometers all the way through to the longer wavelengths in the infrared.

That's ultra violet, B and A, seven colors of the rainbow. and then broadband infrared all the way out to about 2,500 nanometers gets through the ionosphere.

And then as the sun comes down, it hits surfaces, grass, dirt, leaves, us, the environment, and there's scattering. A lot of the scattering in a natural environment is in the longer wavelength infrared.

So you have this infrared enriched environment and the sky is blue. We only see it as blue because we don't have cones that pick up purple light. Otherwise it would look purplish because purple scatters in the Rayleigh scattering more than the blue, so I've kind of painted the picture of a natural environment.

Now when you shift to a modern world, You start to see different formations of scattering. Obviously there's cloud formations and other things that could be manmade or could by induced by industrial pollution.

It could induced be by volcano sulfur. Could be induced just naturally by the vesicles evaporating. But that can alter the spectrum as well. So we've got that from the top.

The blue sky is actually around 40 to 50 percent infrared when you have a green space underneath it, because there's this sort of scattering effect between the ionosphere and the green foliage.

So if you touch a leaf, and it's the middle of the day and its really hot, 85 degrees outside, that leaf is cool as a cucumber because it is throwing back the infrared to the environment.

So we know that there's infrared flowing everywhere. Now when we're in a concrete, asphalt sort of environment, something more modern building city type environment that will actually absorb a lot of that infrared and not forward scatter it back to people around and their organisms, but it will reflect a little more of a shorter wavelength blue and purple and ultraviolet light.

So you have this distorted shift towards the shorter wavelengths, which can then be called artificial unbalanced light exposure. That's the way it works in our modern cities.

Then what we did is we added in a lot of these other artificial frequencies in LEDs, fluorescence and compact fluorescents, and then a of other neon signs and things like that.

There's lots of different forms of artificial light, And look incandescent are actually artificial as well, but it's a burning filament. So it much more approximate to a fire or sunlight in general.

But we're going to leave that in a category that that's. A decent step towards nature as opposed to something that is very against it. The artificial light side of things is only really important when you change the spectral balance of what nature delivers.

We have to look at unbalanced versus balanced. I call artificial life anything that doesn't have. about 50 or so or more percent infrared. So every light source needs infrared, or it needs in infrared in the environment where the light sources being delivered, ideally from the same source, but it can be coming from scattering around.

So obviously we went through this oil crisis, energy crisis back in 80s, and then this whole green revolution came through and we decided to save money on lighting.

We didn't design it for biology. And so over the next 20 to 30 years until the early 2000s we phased out A lot of the incandescent, a lot the kerosene, the candles, or the close approximate natural light.

Too much more fluorescent dominated, compact fluorescent. And then in 1996 the blue LED was invented. The first time you could shoot Just narrowband blue light without any infrared.

And it's brighter because there's no emission from it. So you imagine with an incandescent, there is heat emission. With a candle, There's smoke. There is no off, like negative discharge from that, that LED.

It pretty much runs at 55% efficiency and it is just electricity to light. Um, and so we have not only the first bright, brighter than we're used to, but also narrow band unbalanced light, And so that was put into our tech screens, it was into indoor lighting, all of our computers and our iPads and TVs and any indoor environment you can see it does not have infrared in there.

They put plants inside to try and make you feel like it's nature. But without the actual infrared exposure, those plants are not throwing any infrared back.

So they're useless. Open a window, now that plant indoors becomes a part of a more natural environment, right? So you either do that or you add in more infrared into the light indoors.

So the artificial light is much more about the balance. And the problem we have is every single bit of that entire full spectrum that the sun delivers and the natural environment scatters has a biochemical function of energy and information in your living system.

You may see in the literature and it's very early days, I would say, in photo biomodulation literature, red light therapy literature. Blue light for acne, green for balance, color therapy, all that.

To me, it is very earlier in that day. Even though Jacob Israel Lieberman and Alexander Wunsch sort of pioneered those areas a long time ago, building on some of the early 1900s Russian and Japanese research.

But it's still very early because really we've only got either LEDs or wavelengths that are very pointed that we discovered. Most people know 660 nanometers stimulates mitochondria.

You know, 670 helps with the lens of the eye, helps reverse macular degeneration or myopia. Then you've got 810 for Parkinson's, 830 for skin conditions, 854 mitochondrial cytochrome C oxidase.

You got all these little things, but what about 851? What about 847? what About 912, right? Every single one of these have not been studied yet. And they are all delivered by nature.

And I'm here to tell you they're all important. So we can't just… I definitely understand the importance of nature in the sense of what I tell patients every single day is that the more time we spend outside, the longer we're going to live.

You are pointing out all of these fantastic areas where we try manmade things or trying to maybe support the environment, maybe trying help us health-wise.

Maybe there's also some nefarious things that are going on also that maybe, again, it's in the business of being sick and this is where they're going.

You mentioned firelight, you mentioned candlelight. And aside from the smoke issue, is there something therapeutic? and healing and beneficial about actually watching those at the end of the day, or maybe, you know, again, if you are someone who spends so much of your time indoors in the artificial light, and we'll talk about your lens technology that you're using to mitigate for everybody who's indoors, we will talk that in a little bit, but again healing about firelight, candlelight.

Tell me that. Yeah, so firelight and candlelight fit in about right around 2 million years ago, supposedly, first records of that. And clothing was the first time we sort of natures circadian inputs from all our photoreceptors in our skin, non-visual photoresceptor.

So clothing sort started that even though natural fibers, there was still a consequence. Fire was sort the second circadian dysfunction where, you know, we started having light after dark.

Firelight, candlelight, and melatonin as a local antioxidant

Maybe that meant that we could eat later, not as Well, maybe it meant that we could be more productive, be, more industrial. And it gave us the function of that, but it also allowed us to create culture and ceremony and really deep, beautiful practices.

Because that extra infrared enrichment in the body is so foundational. and we know this because hydrogen's emission spectrum is in red range at 656.3 nanometers and it goes out into the longer wavelengths as it radiates.

So we're in a red light world. Red and infrared world, it is the foundation that provides the electron vaults for all living systems on earth as a beautiful oscillating system that we are, animals and plants are.

We have this gentle energetic oscillation that bumps us. And then eventually there's an activation energy once that more fuller spectrum, the ultraviolet, blues come out, that allows the ionizing of that function to work properly.

But you need that activation. to start humming the engine, just like with an old car. You have to warm it up for 10, 20, 30 minutes before you start putting pedal to the metal to get the best performance out of the engines.

So biology is engines, and we need infrared to set the tone. And we found that the highest photon per second density in the sun is right around 1600 nanometers.

Has anyone put that into a light bulb yet? Has any one put into their therapies, their photobiomodulation? No, but it's in fire. In fire, it reminds us of our primal nature.

It reminds of how our water chemistry is designed to be structured because water has a high affinity in absorption from 1600 up to 3200 where Pollock and all the other guys decided to focus their attention on.

So at the deepest level, our water biophysics, which is predominantly us, I'm about 70% water. I tested on a bioimpedance analysis, but 98% of all our molecules are H2O water, so we have this, this water fluid living system

that is obviously structured.

And when we, have that fire exposure. whether it's in the evening or during the day, or sometimes it is even really nice in morning. If it outside and the smoke is able to leave that area, then there's almost nothing better as the feeling.

I'll also mention the flicker of fire is very, very minimal. It's about a 2% melatonin suppression. So there's a very, very small amount. That's really from the yellow, sort of more slightly green wavelengths, depending if the fire is really hot.

If it's hot or it is lit by an electric source or something like that, we can have slightly more than that as a spectrum and a flicker suppression. But other than, it has like 98% benefit and it will help you stimulate melatonin, structure your water, rest and digest.

As you're talking to it, just goes back to so many common sense principles of How, like how ostracan we are when you look at firelight, you know, your at the campfire.

where you look at a candle and how attracted we are to that. And you never experience that, luckily, when you're staring at an LED bulb or like there's no, there is no fascination.

There's, and it's just, you know, You can obviously go into quantum biology and deep physics and, uh, And just all of these different areas from a biological systems standpoint, but it really is these just common sense.

When you think about these things, Whenever, whenever people try and argue with us, right? And they're like, oh, there is no evidence of blind play. And you're, like it's just common sense.

It's, just, you know, this ancient wisdom that we've had. You mentioned Flickr and you mentioned melatonin. What is, give me the, the 101 on what is melotonin and why is it so important that.

We optimize our levels. Yeah. So most people think melatonin is a circadian hormone. It's it, it kind of is, but it's not really that's going to be busted in the next 10, 10 years or so it a hormone, But it is primary antioxidant.

That's its main function. We know we have to understand melotonin and is produced about 95% of it in subcellular spaces, especially around the mitochondria and by the Mitochondria.

The other 5% in a pineal gland is induced converting from serotonine after sunset. And this is what helps us, you know, get into a more deeper regenerative sleep and acts as the fuel.

But really melatonin is a primary antioxidant acting locally in almost every single tissue. So when we suppress melotonin, then we disrupt the natural healing response.

of that local tissue. So it's a really big problem in our modern world because we have generally the bluer wavelengths suppress the melatonin, the red longer wavelengths tend to stimulate the Melatonina.

Now, when it is delivered in its beautiful full spectrum, you have this really nice cycling and this beautiful balance. It's given at nature's power density.

it has been regulated for 4.6 billion years with all life on earth. And so we had this nice regulation of it. Melatonin is actually, and this is really interesting.

We know this because of the nano live studies. So there were some nano-live studies that were done, especially out of Glenn Jeffrey's University College London lab.

And he was shining blue light and then red light on mitochondria. He found the blue-light within about three minutes, the mitochondrion stopped moving, stopped respirating.

When you shone the red light, the mitochondria continued to move around and obviously that means, what do we make in the Mitochondria? We make sex steroid hormones, we can help him proteins, We can produce lots of other peptides, signaling molecules, all these amazing things, right?

And melatonin. So the reason I say it's not a circadian hormone is because there's been recent studies testing sweat swabs of melotonin on the skin after people do exercise.

And Melatonins through the roof. So you have cortisol and melatonin both super high during the day after you've exercised. Same as when you do a red light therapy or you're sitting in front of a fire.

You can do sweat swab of sitting front in the fire and you can find your skin is producing melotonin in response to that fire light. Doesn't make you sleepy, but it's still being produced.

So that's why I say the primary function is antioxidative. Now, the challenge we have is there's a lot of processes that require that melatonin to actually help recycle things in the body.

So, as an example, your cone photoreceptors, they are bound to a vitamin A, a retinol. And when that cone photo receptor needs to recycle, it releases its transretinole aldehyde radical and that needs be recycled through that Melatonins system.

If there's no melatonin there, that transretnol aldehyde starts seeking oxidative damage. It steals electrons from everywhere around it, wherever it can get, and that creates an oxidated cascade.

So without the melotonin control, our photoreceptors don't recycle. And then at the same time, GABA, which is important for sleep, if that is not optimized, because that blue light coming through the eye tells your brain it's daytime, so therefore GAB is now working to pull you into sleep.

Now you've got the second photo repair system broken. And the third one is dopamine. When you don't get that natural light through your eye and instead you're getting the artificial light before sunset, dopamine stimulated, that is your third breakdown of photo recycling.

Now you are going to see a degradation in your cone and rod photoreceptors. You're going see degradation your IPRGC, your melanopsin non-visual photoresceptor because they all rely on this retinol, retinal, trans, sort of recycling system, right?

So without that melatonin to act there, we have really big problems. And, you know, tell me your thoughts on melatonin supplementation. A lot of people listening, they've heard about melotonin and supplementing.

And when you go high dose meletonin, it is known to be a tremendous antioxidant. It's no longer for sleep effects. So it's used a lot times in people under extreme oxidative stress.

Thoughts on Melatonins supplementations? Yeah, personally, I don't think you should supplement anything you make. That's like my golden rule, but.

Melatonin supplementation and why the body should make its own

When you're treating patients in severe situations, and luckily I'm not an emergency medicine doctor, I don't work in that type of situation, but I think there are absolutely times, just like with a lot of other medications that have side effects, there's times where you can use melatonin supplementation.

I think maybe air travel when it's a, you know, 16 hour flight from, like I take sometimes when I go from Melbourne to Texas, Australia to texas, if there can be a melatonin benefit when there's severe disease, there could be certain melotonin benefits, but if you are taking it regularly, There's only a matter of time until the research really shows the detriment of that.

And remember we make meletonin in pretty much every cell, wherever you find mitochondria. So if you're supplementing melatonin, it's going into the gut where there's a whole lot of serotonin produced in the enterochromophon cells, which has its possibility to turn into melotonins anyway.

So you've got to address gut issues. You've gotta address why those tryptophan residues are not turning into seratonins and meletonin. The problem I have with it more is you are band-aiding over solutions that are going to make the body more confused.

So I've been a big advocate of people coming off all of these hormone therapies gradually and weaning them off under medical care. Coming off a lot of medications and things like that slowly to be, they can transition to homeopathy or naturopathy, or more gentle supplements that a natural art doctor prescribes.

And I think that's a really good adjunct to get people back to trusting their living system again. And then when they get back to that, then they can find that their body will actually start to regulate.

You're not broken. Not broken, we just need to find out how the body's actually designed to signal and couple these feedback loops. And we don't have to mess with these hormones.

So generally I'm a big no. Yeah, I love what you said there, you know, as far as anything the body makes, ideally we're not supplementing and everybody of course is running around these days and they're taking vitamin D would be the penultimate example of a supplement that everybody is wanting to take.

And then you mentioned obviously vitamin A you've got a lot of the different B vitamins that your body either gets in from food or the gut microbiome manufactures those vitamins.

You clearly have a very good grasp of quantum biology. So let's take a look at the supplements industry, you know, real quick, as long as we're there, because, myself, anybody who would look in me would accuse me of being a conventional pharmaceutical pill pusher circa 2004. And then circa 2014, a vitamin puscher, right?

A salesman of the vitamins. Because when you come out of the conventional world and now you go into the holistic natural world, the first jump is, hey, listen, okay, well, we're not going to sell pharmaceuticals anymore.

We're going sell supplements. But obviously my understanding over the years has really changed. Tell me why a vitamin D supplement is different than vitamin D that your body naturally creates or that you consume when you Consume an animal source of vitamin d why are vitamin?

D and these other vitamins? Why are they different then the synthetic stuff? What if your heart could actually get better, not just managed? What of your recovery didn't depend on adding more prescription drugs, but on finally understanding why your is struggling in the first place?

I'm Dr. Jack Wolfson, cardiologist at Natural Heart Doctor, and we believe heart disease isn't random, it's a message. It's message that inflammation, toxins, nutrient deficiencies, or lifestyle stressors are driving your symptoms beneath the surface.

That's why our approach goes far beyond the band-aid, typical cardiology approaches. What we do is if we want to prevent, treat and reverse cardiovascular disease, we help you develop a natural evidence-based plan to help your heart recover.

So if you're ready to move past fear, past confusion and past just take this and wait, you deserve real answers. visit naturalheartdoctor.com forward slash discovery and get the answers you've been searching for.

The answers that can help you achieve your best heart health. Your next chapter with a simple free discovery call should start now. Yeah. So the biggest point here is really that, you know, we're shortcutting the system.

And anytime you shortcut the system, you stop its natural feedback loops and all the flows. So we make vitamin D

from cholesterol. Here's what's going to be really crazy for your audience is that when you have high cholesterol, it's not generally a problem.

We know that from the Framingham Heart Study, but cholesterol will go through its isomerization steps all of the way through from. The skin down to the liver and then the kidneys to turn from, 25 hydroxy vitamin or pre-vitamin D.

three, all the way through to active 125-dihydroxyvitamin D. That system needs to go through its process. And when you shortcut that system, the bioavailability of supplemental vitamin D is quite terrible.

Even when taking it with magnesium and K2 and all of the other things that your functional doc will tell you, It's still not nowhere near as good. I remember my research advisor, Jack Cruz, he says to me, taking vitamin D and expecting it to do what you do is like going to the gym and having your gym trainer do the pushups for you and expect to get stronger.

So it's a shortcut of the system. But what most people don't talk about here is that when you actually go into a phlebotomist, a lab to test bloods, you can actually see right now they've tested 18 different 25 hydroxy vitamin DS.

There's actually 18, different ones. And the body will produce those naturally. And then when you get your blood test result back, they'll average those and they will give you a number and that's your 25 hydroxy.

So the problem with this is when take the supplemental vitamin D, how many of those 18 are you hitting? Most likely you're probably hitting a third, if that.

Maybe you are just hitting one. Then we're just set to the same thing as the photobiomodulation industry. Just feed them 660, 850 in a light panel and here you go, let's just hope that the bodies knows what to do with that So if we think we're going to engineer the body and we are smarter than Mother Nature, we aren't.

There is no way that we can do that.

Vitamin D, supplements, and why natural production matters

But what we have to do if you're inventing vitamin D supplements, you need to prove to me that you've got a good grasp of how that whole system works.

You need prove that those 18 different vitamin 25 hydroxy vitamin Ds, you need to know what happens with the vitamin B binding proteins and how much that affinity works with this supplement.

And as far as I can tell, no one's really presented that information. That is brilliant. I've never heard of the 18 different forms of 25 hydroxy vitamin D, but it only makes it.

Only makes again, this is such common sense stuff. We love to geek out on the science and listen to brilliant people like yourself and Jack Cruz and read books by, you know, Robert Becker and Gerald Pollock and all these things.

But it really is. Such such commonsense. type of issues for the majority of people listening. It's just, vitamin D is from the sun, it's from food. Let the animals do the work for us.

I guess maybe in that sense it is a matter of, right? So yes, we don't have to go to the gym and the trainer isn't, but the animal is doing it for and that's going to be the second best thing to The Sun.

Love it, love it. What is, what is circadian biology and how important is it for people looking to avoid heart attacks, cancer, dementia, all of the, All the labels that the medical doctors love to give to people.

We're really good at labels. Were horrible, of course, at root cause. Circadian Biology and why is important? Yeah.

It's, it's really just so foundational.

And the fact that it is not focused on or taught is a real shame. So if everything you're going to focus on in your health journey doesn't involve circadian biology, just take a step back and just remember that your body works on a light, dark, 12,12, 24 hour cycle.

Okay. We're designed to have light during the day. Were designed have darkness at night. When we started migrating away from equatorial zones, that 1212 got distorted.

So we started going up to Northern Europe and now we had really long days in the summer, really short days, in winter and we can classically see all different circadian derived diseases being caused up there.

So in that situation, you've got seasonal depression, an ad night shift and all the lifestyle habits that modern humans have with all our artificial light habits and you have total dysregulation.

We're designed to get bright, full spectrum light in the morning from the sun. When I say full, I mean that full seven colors of the rainbow, 50% infrared, and then some scattering ultraviolet from Rayleigh scattering that are coming down.

You're getting that during your sunrise, right? It's not coming from sun directly, that ultra violet, but it's coming above and around you in your environment.

So you are always getting full-spectrum. And then that will shorten the circadian phase, meaning that you'll get tired earlier, Meaning you will go to sleep better.

You'll fall into sleep deeper and you wake up more refreshed. And that's how we're designed to live. When you have lifestyle or migratory changes to that circadian system, you start to delay phase.

you Start to late in your bedtime. And then you start to have dysfunction, especially on the hormonal axis, because that first light of the day, 30 minutes before sunrise, where you see that beautiful blue hue of 480 nanometers and all the other light wave, that then goes through your eyes, through you skin, turns on your master clock, the suprachiasmatic nucleus in the hypothalamus.

It tunes that clock beautifully. And that has relay stations that go to the paraventricular nucleus. The, the herbenia nucleus, which is for your arousal, The paraventricular controls the parasympathetic sympathetic sort of switching, Which goes down to the heart, obviously regulating the heartbeat.

And then that goes and sets your endocrine timing for the day. It tells your, your adrenals to secrete cortisol. You need that. That's the only thing that wakes you up.

Cortisol goes up in the morning through that light exposure, that then motivates food-seeking behavior. We're designed to break that fast within an hour of watching the sunrise.

That's a huge part of this proper functioning system. And you're not supposed to wake up with an alarm. You wake in tune with your body regularly 30 minutes before sunrise, and the thing I have to mention here is a lot of people go, but I'm a night person.

I am a Night Owl. No, there are no chronotypes. It's going to be shown in the literature in about 10 years time that there is no cronotypes, no circadian dysfunction variation between people genetically other than 30 minutes from the two extremes.

You have people at 23 hours and 45 minutes circadian rhythms and you have the other extreme of 24 hours in 15 minutes. They are the most extreme genetic mutations of circadan rhythm changes.

So I'm sorry to break it to you, but your listeners out there, you are not a night person. You have delayed your

phase. you have skipped too many sunrises, You've probably had a busy day and you're trying to squeeze in some alone time or some productivity time when things are quiet and everyone's in bed.

And then you're taking and stealing from your stem cell reservoir because you not getting that nitric oxide in the morning. You're not, getting super-cosmetic timing.

Then you also stealing for me, sex hormones. So you'll end up being flat on that side. Cause you generate your sex hormone for the first few hours of the sun until the ultraviolet comes out.

Circadian biology, sunrise timing, and the myth of chronotypes

That's the stop on sex hormone production. So you want that beautiful preserved morning time. Everyone needs to be a morning person. And the one thing I'll say on this as well is if you're on the West of a time zone, and I spoke in Spain about three months ago and Spain is a really big example of this.

They're are on a very far West, they're in line pretty much with England, the UK and Portugal, UK and Portugal are an hour ahead of them. So their sunset, and you look at the other side, Poland.

Poland's on the same time as Spain. And when you have a Polish sunset it's about an hours and a half before Spain's sunset. Everyone on a west of a time zone has a delayed circadian rhythm, meaning they're eating later, they are going to bed later.

Because you don't go on man-made time, you should go in the sun. You should on when the Sun is. So the whole time zone's mixed up. Same in US, some big states.

If you look at the West of the state versus the East of state, the east of a state is mourning people. And there will be shown, no one's done the study on this as far as I know, but there'll be showing statistical data in time zones that the EAST are healthier than the people on the west of timezone.

And that's not because of nature. That's cause of manmade timing systems that we like to live by instead of following and trusting our circadian rhythm.

Amazing. Why would Spain and Poland be on the same time zone? That's absolutely, it's almost like, you know, Nathan, when you look at all the stuff, again, not to go full conspiratorial, but it is like they want us to be sick.

They really, really want, us as the consumers. The hospitals want to sick when the hospitals are full, they make a lot of money. the pharmaceutical companies, the doctors, Is it really so much of a stretch to say that?

And like you said, just follow the circadian pattern. When it's dark, you're awake, and when it, excuse me, when its dark you are sleeping, When its light, your awake and it is as simple as that.

But answer, give me this, so you brought up a good point because I think a lot of people in our circles, everyone is running to watch the sunrise. But what you seem to be saying is that it's actually, it is the 30 minutes or so before the sun even comes up and that is available to anyone everywhere.

No matter where you are, you don't actually have to see the Sun coming over the horizon, although that's going to Probably the best scenario, but I'll say this.

I'm kind of guilty of this as well. Like I wake up 30 minutes before the sunrise and I, as you said, I am a perfect example. Oh, everybody else is sleeping. I'm going to use this time.

Answer some emails. Do some research, you know, whatever. And I missing this very important part. Yeah, it's huge. And, you know, once again, most people in this space, You've got people designing circadian apps and people building light bulbs based around circadian timing of the sun and all these things.

They haven't considered the optics of planet. they haven' considered Rayleigh scattering. This is why I started the podcast with this, to give people a frame of how it is more than the Sun.

It's all the ambient scattering and optical programming from our environment that is so much more important. First people who sell blue eye-blocking glasses, they'll tell you, oh yeah, as soon as it's sunset, put your glasses on.

No. Put your glass on 40 minutes after sunset when that blue hue starts fading. Is nature wrong? No, nature's not wrong. Nature's undefeated. So this morning part eases you into the day, into that beautiful practice, which is why for me, I do my qigong.

I did my spiritual practice in that 30 minutes before, so that when I'm actually ready to welcome the sun and ready, to eat my food within half an hour of the Sun rising, i'm warmed up.

i am lubricated. My energy is flowing. Can feel my pinky toe. can feel everything moving. And obviously that's the heart vortexing as well, right? That's blood flow.

That is the connection to the brain, the gut. And I've activated that. Now I'm not perfect. I sleep through, you know, that 30 minutes, sometimes once a week, or sometimes, once, a month, depending whether I am traveling or things like that, so, I know I, am not, perfect, but the difference in my case is, i'm a canary in the coal mine, two time cancer survivor.

i've got a completely scarred retina. Well, got 90% scarring on my retinal pathway. all the way through to my circadian clock is definitely disrupted and my whole endocrine system there is going to be disrupted.

So for me, I mitigate that through my skin exposure. When I'm out there doing my qigong 30 minutes before sunrise, i'm making sure I've got tan through shorts on and I am as naked as I can be that's appropriate.

And I'm making sure I am getting that ancillary pathway because we can control that clock in our brain through our skin as well. It has a big impact. So this brings it to, if people are just focusing on blocking the artificial light from their eyes.

Beautiful. Step one. Great, great way. Think about your skin too, your largest organ. has melanoxin, it has encephalopsin it, has neuropsin. These are the ultraviolet, purple, green, blue photoreceptors.

these are really important to make sure you're regulating that bi-directional route from the skin, gut, heart, to the brain that way. It's not just top down.

Brilliant, brilliant information. You know, cause whenever I speak at these various health related events or I'm actually speaking with patients over a zoom call and we're talking about all the benefits of light and circadian biology and rhythms and what do they say?

Well, you know. I live in Calgary. I lived in Minnesota. Live in your hometown of Chicago. What should I do, Nathan? We can't do this. And what do we tell people?

Move! Move. It's real, real simple. Our ancestors came from the equator. They came form the Middle East. And actually the Middle East, you know, it's very interesting because we talk about, again, whether you would side with the biblical version or let's talk evolutionary version, the Northeast Valley Rift in Africa.

You never really think about this, but Israel. The land that is now Israel, that's actually at the same latitude as Los Angeles. So, yet so much of, I guess, the foundations of a modern society were in the Middle East, uh, yeah, it's not equatorial, but right.

I mean, That's the ultimate strategy to tell people, or I tell People, Nathan, take a lot of vacations for every five to seven weeks. You're up at a Northern latitude.

Go to the South Caribbean. go to Panama, go, to Costa Rica, or to Southern Mexico. And really it's just as simple as if you want to live, these are the best things.

and I understand if. You love Green Bay, Wisconsin, you get your family, got your friends, lots of memories, wonderful summertime, totally get it. It's.

Just not a survival strategy. No, it's not. Unfortunately, I've worked with about 1,200 clients and all of them have struggled with that decision. The ones that moved were the ones who got the result in their health journey.

And what they do is they generally start with a sort of snowbird migration over the winter, a two, three month, hey, let's try out Panama, Mexico, whatever it is, Costa Rica.

Then they slowly get used to that and the problem is The disease, in my opinion, is caused by their environment and their lifestyle choices. And so in that environment, they've probably built up a lot of defense mechanisms.

It could be extra fat, extra subcutaneous fat which is protecting them from EMF and energy dysfunction and having a heart attack and other things. Or it could be other defense mechanisms they've built up.

And when they get down, there's this sort of detox effect. There's a saw, I've just got down to Costa Rica and I'm feeling like the first three weeks I was like, you know, diarrhea and my skin's breaking out and i've got this and that and you feel bad.

It's like yeah, your body's finally letting go. It's finally giving permission for its phase one and two liver detox or its skin pathways to actually finally release.

And, and this is the problem we have with, with most people that you and I deal with is it's like, okay, yes, you need to move, right? And family structures and things and jobs and needs to be flexible.

Yes. Okay. But your health is more important than your bank account, unfortunately, or fortunately. This is something that, that. take step one to do, but it doesn't take two weeks just to reverse a chronic disease.

You're trying to revers type one diabetes, you may have to live in the tropics the rest of your life, or you're trynna reverse some significant autoimmune condition like multiple sclerosis or something else.

you might have go down to Costa Rica for three years, I'm sorry. Do you want to be well? Do want live vital just like Dr. Jack said at the start of this podcast?

We're here to live vital lives. If you don't have a vital sense inside your body, then you are missing out on the potential of who you could be. The love you can give, the business you create, and the impact you have on young people, for whatever it is for each person.

For me, I needed to not get cancer a third time and I need to figure out how I can stay healthy forever so that I could serve and help the planet. And that's why I built Biospectral Systems.

That's Why I'm building solutions. that is why i'm connecting with great people like Dr. Jack and your community, you know, is to make sure that I am my most vital self.

Latitude, time zones, and why moving closer to the sun helps

And I can tell you like I've met a lot of people with bilateral retina blastoma as an eight month old baby, which is what I had. They're not, they're doing as much as they could be.

And it's a shame because I would like more people in this community to come out and start charities for brain cancer and stop movements and started doing all these things.

But the fact is they're struggling with their life because they haven't figured out their skin can repair their brain and eyes. They haven' t figured it out that their optometrists and ophthalmologists are telling them to wear sunglasses.

That's what my opthalmologist told me my whole life until I was 24, until i stopped listening to him. I stopped blocking all of that natural ultraviolet light.

I had depressive episodes, suicide thoughts, all these things, because I wasn't getting that ultra violet stimulus through my central retinal pathway to help my brain create dopamine, to create serotonin, the mood stabilizers through the herbenia nucleus.

So I can just see the disservice that people are in their environment. And I know I've touched on a lot here, but if someone can just peel back their layers, look at their circadian biology and look how their enviroment is truly serving them, follow Dr.

Jack and I in our missions to give you the easy way out. The easy out is just move. No, so much brilliant wisdom there. You know, when I spoke at the Truth About Cancer in 2016 from the stage in front of, there must've been around seven or 8,000 people at that event and obviously hundreds of thousands that live streamed and watched the recordings.

But I said, you can't heal in the same environment where you got sick. you've got to change it up. And that's exactly what you said. All right. Let me ask you at least one more question before you're going to tell us about, for those who are looking for the best.

blue blocker glasses when you need to be awake at night, which we're all in agreement that you shouldn't be. But if you're traveling or you are a shift worker, we respect what you have to do.

We're going to try and give you the healthiest ways to mitigate that. And the other thing I would also mention is that, you mentioned in those sunglasses, So immediately everyone threw out your sunglasses that I'm going to paraphrase or I want to say that get rid of your sun glasses.

The sunglasses industry, everybody who runs around here in Scottsdale, Arizona, they got their fancy sunglasses. Everyone's blocking out the sun, the Sun's so bad.

And it's like you and I hear that and it just absolutely so catastrophic. You almost have to laugh at the idiocy of what's happening. Tell me about it.

I was going to say Jack, it's nails on a chalkboard for me because it touches me so personally because that was one of the things that weakened that access in me.

And I developed testicular cancer at 24 and we make that signal through the hypothalamus down to the gonads. and it's obviously mitochondrally based as well, without that light going through the eye.

And something that your audience will probably latch onto as, well really importantly is that UV light through, the eyes stimulates nitric oxide. Oxide helps the heart calm down and be quiet, as wel as regulate its rhythm to be, get into its stressed sympathetic state to give you all the things it needs.

So, you know, this, that the, heart has, In the myocytes in the heart, 40% of that volume is mitochondria, right? So we have this unbelievable, relentless, never stopping mitochondrial ATP production in heart.

And that's dependent on infrared and ultraviolet light from the sun, especially through the visual axis. So if you can't get your heart to a gentle rhythm at nighttime, down to 40, 45 beats per minute, let's say, mine was 44 last night, then you're not gonna be able to sleep properly.

And at the same time, if you're not getting the ultraviolet through the eyes, you not going to make enough serotonin and then therefore melatonin in the pineal gland to pull you into a deep regenerative sleep.

So your brain's not sleeping. And the other thing is when you don't get that UV light through, the eye, it doesn't trigger leptin properly. Leptin ends up staying higher than it should at nighttime.

That has a downstream effect on vasopressin. Vasopressin is anti-diuretic hormone, so when that is not secreted, then you have to go to the bathroom at night.

So how many people have a high resting heart rate at nighttime in the 50s, 50, 60s and 70s? How many are going to bathroom? Your brain and your heart are not asleep.

You are NOT regenerating. So light through the eye directly impacts the brain and the heart to allow you to get into deep sleep. And as we know, sleep is where everything amazing happens.

DNA repair, all of those things. Fantastic, fantastic stuff. Seafood is seafood. Break that down for me. Why is it so important to eat seafood, wild salmon, sardines, clams, oysters, shrimp, lobster, crab?

Why's that so for overall health and wellness? Yeah, I actually scoured your website as well recently and I saw the wild caviar supplement. I'm going to get some as soon as I finish this because I might need some more before I get on that flight back to have some oxidative radical protection.

But the amazing thing about seafood is it's this omega-3 profile, which is really beautiful and really important for the brain. And I'll set the scene by just saying that The other animal that has a 1% or bigger brain to body ratio is a dolphin other than humans.

And dolphins eat fish all day. So we found a correlation between the way humans have migrated. It's not the Savannah hypothesis. We didn't migrate across these deserts and hunt animals and breed chickens and things, those humans didn't have as big brains as the ones that stuck around the waterways and were consistently eating seafood.

And if you think about seafood, it's hard to go fishing and it is not very abundant right now. That's because 90% of the seafood is gone because of electromagnetic changes and the overfishing and plastics and other things that are in there.

But you could just imagine walking out to any beach and you would see lobsters, crabs. I mean, it's there. It was there for a long time. So it was something very important in our food chain.

And to touch on this really importantly is the central retinal pathway, those retinol hypothalamic tracts. They actually contain a huge amount of docosahexaenoic acid, which is an omega-3.

It's the most important omega 3 because the conversion from EPA to DHA is rate limited.

Sunlight through the eyes, sleep, and the dangers of sunglasses

So it's more important to get bioavailable DHEA, which means SN2DHA in your diet. And that only comes from the seafood marine chain, the animal chain. or any of those others, the kelp and the other sea vegetables, they'll contain a different form of DHA that needs to be digested by the animal in the ocean to then switch it into the nice placement.

Just like the animals do the work for vitamin D when we eat the fish eyes and fish skin, same thing with the Dha. The animals need to eat their krill and all those things to turn all of that into SN2DHA, which we can take in.

And then we can line that central retinal pathway. So if you imagine it's just like an ice skating rink, when the light comes in and it goes and gets transduced into the electrical signals in your brain, those electrical signal will tunnel like a superconductor, like copper wire all the way through.

to those deeper parts of your brain, the suprachiasmatic nucleus, hypothalamus, pituitary, habanula,

paraventricular nucleus. All these incredible areas, I'm just naming a few, that are so keenly responsible for your heart rhythms, your endocrine secretions, nervous system regulation, all these things that a lot of them are very unconscious to us.

And this is why just changing your passive environment and changing the food that you eat will unconsciously bias you towards better hormones, better autonomic nervous system regulation, and better heart rate variability regulation.

So that DHA lines that area as well as it's also those docosahexaenoic acid molecules are also in a lot of the lipid membranes. And as we know from Bruce Lipton's work, and I remember I was eight years old listening to a Bruce Lifton cassette on, you know, You Can Change Your Biology of Belief.

You can change all this. And it's the membranes that are our antenna primarily for this environment. We want those membrans to be loaded with some high quality DHA and omega-3s.

And then we want that to change throughout the seasons. So we need more omega-6 in the summertime, which is why when you go to Costa Rica, you're eating a lot of beautiful fruits and vegetables.

You don't have to have as much seafood because your cell membranes work with the sun much better with those omega sixes. Whereas you through to the winter time up in Wisconsin or in Canada or Finland, now you are going to need a whole lot more Omega-3 in order to capture that sunlight and turn that into useful energy.

Your diet changes based on where you live. And if you feel like hacking it, like I do, I get my oysters from here and they come from Baja. So I'm in Tulum, Mexico.

They come Baha, California. And they're coming from a little bit higher latitude. I am not technically eating it from my environment, but I bring down some of the best DHA to this environment and I actually feel more superhuman.

The reason you do it that way is because it's really difficult to bring stronger sunlight to a weaker sunlight environment. So same with cold thermogenesis, cold exposure goes with seafood, goes, with grounding, it goes more oxygen.

That's the way that nature built our adaption system as we migrated away from the equator to stay healthy and energized. So we can use that, but then you're missing the sun.

So if you are in those environments, yes, try and use what you've got. Eat lots of seafood, eat lots DHA to load that system. Do lots grounding, get lots infrared light in chlorophyll rich environments.

Sleep in absolute darkness. Breathe beautiful oxygen through your nose. It helps the heart. do all those things, but if you've got a chronic disease, you may not be able to reverse it with that.

So that's why bringing the cold and the seafood and grounding to a more subtropical or equatorial environment is the move for greatness. That DHA, it gets degraded by artificial blue light that's unbalanced from your LEDs, from computer screens.

All those things will actually degrade and oxidize those polyunsaturated fatty acids, the Dha. The amazing thing the body does is it turns those oxidized poofers of DHA into protectins, resolvins and mersins.

And these are incredible anti-inflammatory molecules. So your body has a redundancy system to help preserve that central retinal pathway and your cell membranes and all the other areas of the brain where DHEA and omega-3s are located.

Your body's still working for you, even if you do have that DheA, and it's being oxidised. Then what happens if the more blue light you have, the most it's oxidizing, then you'll have to replenish it.

And that's where the Bazan long loop from the liver up to the retina needs to be activated. So you need to eat more to replenish that system. I'll give people an example, just to replace those, your full membranes in your body from my estimates with my clients that I've worked with takes about two years to fully Line that central retinal pathway, build that whole brain DHA reservoir, fill those cell membranes with the right amount so that you can semi-conduct and transduce all that beautiful information from the environment.

So two years. You can't just have a couple dozen oysters and a bit of salmon once a week. Like you have to have three to five meals of seafood per week, do that for two And then try and minimize the oxidative stress, wear the blue blockers, proper lighting, spend time outside.

In two years time, you will be beautifully photoelectric and you'll be able to capture and store that energy and use it for your vitality. Okay. You've been listening to a very, very intelligent and well-read and while experienced person here, Nathan Siles, the co-founder of Biospectral Systems.

And if you're not impressed with this and you are not going to take the next step, which is to purchase the blue blocker glasses that he's going tell us about, you have to be absolutely insane.

If you don't trust the knowledge of this guy. So, I mean, because I'm listening to this, Nathan. I am like, "I'm buying whatever you're selling." This is absolutely fantastic, fantastic information.

So when we are awake at night, and we shouldn't be, but if we're, Because again, the entire world conspires against us. Everything conspares against being healthy, no doubt.

The first time that I put on your glasses, advised to me by a mutual friend, I just felt different than maybe the other half dozen or so Lube Locker glasses I had tried.

And it just, it's just different. It really helped to relax me and just had such a good warm feeling to it. So tell us about the Biospectral glasses.

Seafood, DHA, and building resilient cell membranes

Yeah, so we've been making them for about six years now and we have titrated the formula that we actually put in. It's a melanin infused polymer inside the actual lens, called inmonomer, but you can think it's impregnated in the lens.

We put some coatings and things on there so it doesn't fog up and reflect and be glary and all those things too. But the way we came up with the polymer was we looked at the eye itself and found that obviously the iris of the eyes and the retinal pigmented epithelium has lots of melanins inside.

And we thought, okay, well, if melanin is between the visual experience and the electrical conduction, we should also make sure that that's harmonious with what we put in the glasses so that there's not this filtering of something, maybe the melanine, you know, is designed to help filter.

So we tried to match. We got a natural melanins synthetic, natural Melanin, and we synthesized the, as close of a copy as we could. And then we worked with the guy who's got the patent for it.

So we started infusing that in our lenses. And we changed the formula so we could titrate the blocking of the spectrum so that it was really beautiful at blocking what we want and transmitting what want.

Because we found in the industry, we tested thousands of pairs over the years. All different brands, all different types, some from China, someone from Thailand, from Taiwan, everywhere.

And we had a look at them and this spectral curve was like, yeah, we block at 500 nanometers, but they're letting through about 30% of the light at 460 or 470. and we're like well, melanopsin absorbs strongly at four 80. Why would you let through that light when you're trying to block the blue?

And then some brands came up and there's still brands today, I won't name any, Oh yeah, you should have a bit of blue light activation from the computer screen.

You should be getting some polarized LED unbalanced light from your computer to your brain just to tell you it's daytime. Like, okay, your the same crew that like Huberman does with getting up in the morning and shining a little blue laser in your eye to get your cortisol up so you can get ready for breakfast.

Like, sorry, that's not my crew. My crew is someone who gets up 30 minutes before, prepares their breakfast, welcomes to nature, grounds to the earth.

They're the people that I know will get the best results. And they're on my team. There in my tribe, your tribe as well. So we decided to make sure that we blocked with precision.

We did that with our yellow lenses. Our yellow lens is almost as good as you can wear them after sunset. That's how good we wanted to So they really block that polarized terrible light that comes from the computer and all your indoor LEDs.

And then we made the orange lenses and what we wanted to do with those is it's very difficult already to get people to wear yellow lenses that when their friends are criticizing them or whatever they say, it looks a bit funny or they're starting to become trendy now.

wearing red lenses, especially during the day when you're in an office or around people who have no idea, they'll think you are Elton John. They'll thing you Bono.

You've got glaucoma or something else. So we had to try and make this red into something that was orange, something would still give you a visual experience and also protect melanopsin and protect encephalopsins so that you don't have that circadian stimulus.

So with the melanin-infused technology again, once again it's built by nature, backed by science, and we have lots of studies that are out there already showing that the yellow and orange lenses work way better than the clear lenses.

They don't work. Throw those out. While I'm on that, the reason the Clear Lens Blue Light Blockers don' work is because you have a break between research and reality.

And research says that your cone photoreceptor absorbs strongly for the blue light wavelength, right around 420 to 430 nanometers. So the industry said, okay, well, let's just block that because that's what the body perceives.

Problem is I didn't look at the actual tech industry and realize it's 450 to 455 that comes out of the computer screen. They're blocking the wrong thing.

It's like, a sports team putting a tackler for a position where the guy's not there and the guys just going to go around and tackle the quarterback and sack him.

Just break between academia and actual reality. So we realized that that was a problem and we want to bring something that actually deals with reality so that you can have a good visual experience.

You can a have good sleep, wake, circadian experience and so, that's what we did with the orange lenses. We made them as light as possible so you could block all of the stuff that makes your brain feel like it's daytime.

So we've got them in lots of different frames, obviously lots different styles. And I just wear the Galileo's cause I like, I liked the galileos, but, and we got some more styles coming in as well.

So yeah, really excited. It's, it's a mandatory thing if you're living in a modern world. Yeah. I absolutely love them. When do we wear, the orange again?

Yeah, so the yellow are daytime lenses. So they're worn during the day. And I'm assuming, you know, if you can be, trying to be outside like this. I've got my screen completely red and I got the natural light.

Right now it's not a big deal for me to wear them because I wouldn't be blocking too much. But most people who work indoors, most who live indoors. Most people have lights on all the time.

The yellows are going to provide you complete day protection. And then the oranges are going to work much better that 40 minutes after sunset, let that blue light fade away in the sky and then put them on.

So there's a lot of literature showing, you know, the time you wake and the times you go to sleep is really important for your circadian rhythm. I'm here to tell you it's the timing awake and time.

You put on your orange Biospecs lenses, right? Because as soon as you put these on, I am telling you within 30 minutes, You'll feel like you need to go sleep.

As long as your quieting your mind, your not doing something really stimulating. Real quick, you mentioned the filters on screens and stuff like that.

How good are they? Yeah, they're okay. It depends on the actual screen itself. So I use an organic LED computer screen. I make sure I get as much of that sort of as natural as possible.

That titrates the brightness and all that. so I've measured with my spectrometer, I take it everywhere with me, my computer's screen and it's completely red when I put it on at nighttime.

Doesn't mean I don't still wear the glasses, but I still do after sunset. And I notice a difference between just having the screen completely read and having my glasses on.

versus just having the screen read. So the glasses are still necessary, but for most people's laptops, like MacBooks and, you know, all these other Dells and other ones, Asus's, I've tested a lot of them.

Their screen is backlit by a separate lighting blue lit. and backlit a screen. So even though the screen looks red, you've still got a decent amount of blue.

This is a $2,500 meter. I don't know anyone who's complaining about $149 pair of this that has a two thousand dollar 500 meter, so how are you going to know without, as soon as you get these, stop it?

So you could either buy a two and a half thousand dollar meter, consult with me, find someone who has it, get a building biologist in, which I definitely encourage.

Or you can just use this as a catchall safety and just make sure you got a pair of these. So this is a good place to start. And this where you start getting really curious to help your kids, to your friends and family.

I encourage both, but the glasses are really, really important. Yeah. Well, I think, you know, too, is that a lot of times people are on tech, right? So yeah, You can put something on your, on Your computer screen.

You put it on yourself on, but now you got all this other ambient lighting that's going on around you. And if you're not protecting yourself from that by wearing the glasses.

therein lies the issue. What a great gift to give to people as well. Mother's Day, Father's day, birthdays, you know, your wife, children, anyone, this is so critically important.

Nathan, I can't thank you enough for being on this interview. And tell us again, where can everybody, because not only do you have an awesome website, an Awesome product.

I know you got like a Facebook group for people who want to geek out on a deep dive.

Biospectral glasses and practical tools for light protection

But I just joined, applied to join. So I love it, love, it love. I can't wait to learn more. And again, like somebody can like totally just geek out on the science and it's so fascinating.

But at the end of the day, and train the circadian rhythm, but it tells us more about how to find you and how Yeah, it's really cool. So what we've done, so Biospectral Systems is an education company.

My passion is not creating products. my passion, is delivering the science that's hidden behind closed doors or behind very complicated language to actually bring that to people and families, especially mothers, children, the year before conception, year during pregnancy, to two years after.

If I could prevent my own brain cancer from helping my mom and go back in time, that would be the one thing I would do. So for me, it's my gift of service to help people also have that type of experience.

That's where we focus on. We're like, if we can stop this brain disease from the next generation, or if million autistic in the U. S. now. I mean, it's just wild and it is not genetic and not just expanding the diagnosis criteria.

We've got a lot of brain disease, a heart disease and a suffering and the brain and heart where you store your mitochondria. So we focus on the biophysics, the mitochondrial, hydration shells and learning hub that I've put on website is exceptional.

There's podcasts, there's learning, books as Dr. Jack said. And then there's the mitochondria community. So I encourage you as you're starting to be the first one in your group wearing blue blockers or going to sunrise or doing these things that you join mitochondriacs, realize that there is 11,000 other people globally, just in my community, and there are thousands and thousands in you community Dr.

Jack as well that also live in many ways very similar to this way. And so you are not alone. You have people you can connect with. And so what birthed out of the actual education is the product.

So the products are, we're not a product company. We don't sell products. we don´t just create random products, like the education forms the. And when people can't go out to nature and live, you know, exactly like you and I do, We need to give them adjuncts to get there in their current environment.

so the glasses, we've got a full spectrum light bulb. We've Got a red light therapy helmet.we´ve got air tube headsets. Every grounding sheet right now is harming you.

Every single grounding out there, you are plugging into electric and magnetic fields, high frequency transients. You may get a two week boost, your sympathetic system turns on and maybe it gives you a bit of a defense mechanism.

But after a month, those grounding sheets are doing you harm. They're not working. And so we've solved that. We've got a plug that plugs in between the grounding sheet and the wall.

It's going to solve it all. So we got solutions that we can plug and play into people's lives where we create a sleep sanctuary. that we have at Biospectral.

So you can find us at biospectralsystems.com. You can do the education, but what we've done is we're done 10 years of deep research and working with patients, athletes, CEOs, the most stressed individuals, I've dealt with a lot of people with chronic stage four cancers and they've been able to use nature to reverse that cancer.

They've come back from, you've done four rounds of chemo, the doctors have given up, when do you want to get your fairs in order? And hundreds of these people are still living a decade later.

So there's ways that you can do this, but we do all that heavy lifting of the thinking and whatnot for you. We still

present it to you. If you want to do, I say check all of this research, check it all.

Don't believe me once one iota do the research. But I'm here to tell you that I've done a lot of research and very altruistic. And we've put it into simple digestible formats and products that reflect.

Not the current literature that's out there in science that say statins are okay and GLP-1 drugs are fine. We've usurped that and we've focused on nature rather than artificial clinical trials as the gold standard.

And when you design things based on Nature, education products, things like that, they will hold up the test of time and they'll get you better sleep results.

They will get better heart results, brain results And then the choice is yours. You're the only limiting factor. When I got diagnosed with cancer, the literature wasn't there.

The information in 2015 was not put together. It was still in Russian textbooks. You have full responsibility for your health. And if it's no excuse to say, the information's not there.

It's there, go and find it. There's very simple, actionable steps at Natural Heart Doctor, at Biospectral Systems that you can take today to make a significant impact in your Health for very, very cheap.

Fantastic, fantastic. Nathan, so much appreciation, admiration for you. And again, we'll put all the links to find your products and your information in the Facebook group and the show notes.

Thank you so for being on this episode of the Natural Heart Doctor Show. We'll come back next time with another phenomenal guest. Until then, be healthy, Thanks for listening to the Natural Heart Doctors show.

If this episode challenged what you thought you knew about heart health, make sure you follow the show so you don't miss what's next. And if you're ready for a deeper personalized approach, you can schedule a complimentary discovery call at naturalheartdoctor.com forward slash discovery.