



An Overview of Quantum Biology Research and Its Application in Bioenergetic Assessments

**Greg Eckel, ND, LAc With
Steve McCardell**



Greg Eckel, ND, LAc

Welcome back, everybody, to The Bioenergetic Summit. I'm your host, Dr. Greg Eckel. Today, I have Steve McCardell on board. We're talking about an overview of quantum biology research and its applications in bioenergetic solutions. Steve is a certified NES practitioner, at which he started in 2007. We can call him the old guard with a young mind. Steve was among the first practitioners in the NES Health family and saw clients through his private practice in Michigan. He also has an extensive professional career as a writer and teacher, and today combines all of those in his role as Director of Education for NES Health. He has written and taught extensively on health and wellness topics, including the physics of biology, and is the co-author of the book *Restore Your Energy With Bioenergetics*. Welcome aboard, Steve.

Steve McCardell

Thank you, Dr. Greg, it's always good to connect with you.

Greg Eckel, ND, LAc

Indeed. I'm excited for this one because we've been talking about all kinds of facets of bioenergetics. And this one I want to, we're gonna take a little deep dive into assessments and solutions, in particular, in what the research is showing. So let's start out with, how did you get interested in quantum biology in the first place?

Steve McCardell

Well, so when we first started our health practice, we'd gotten interested, my wife and I, in starting a health practice, because when you're starting a family, health becomes a really central topic for you. And I was not interested in going down a conventional medicine route. I see a lot of value in that in terms of emergency management, but I had really been more intuitively attracted to energy medicine, natural medicine, this type of thing. And so we went that route



with our practice. And once that was open, I mean, in terms of starting to open a practice like that, but then once I'm in practice, I'm doing a lot of ongoing research 'cause I want to continue to understand more and more about that, and bioenergetics was really the core of what I was doing. NES was the centerpiece of that. And so I just found myself studying a lot of the articles and things that are out there about this topic. And one of them just always stuck with me as my starting point, and I just wanted to share that real quickly on-screen just so people could see where I started with this idea. And so you can see this article that I came across, where they had done research at the University of Michigan. They were testing for electric fields within the cells. And the conventional view at that time was that there shouldn't be any within the cytosol of the cell.

And instead what they found, and you can see it here, they said the standard paradigm, there shouldn't be any, but in all the 13 regions they measured, they had a high electric field strength, as high as 15 million volts per meter. And this was really cool for me because it just showed me how much we still have to learn about the body and how big a role electricity, and when you go beyond just traditional electricity into quantum physics, how much there is for us to discover about how the body really works down at that level. And through the years, I've just found more and more things that build on that. So a couple of years ago, in fact, right before I did a training, I brought this right into the training 'cause I thought it was so cool, I found another article, and you can see it here, where neuroscientists said that they'd found an entirely new form of neural communication, and they call it wireless.

They said that messages could leap from one neuron to the other, even in cases where they'd been surgically severed. And the same as with the cell where they found that electricity, well, we have to go back to the drawing board and figure out what this means in terms of our model of the cell, in the same way they're saying, well, there's some process that's not understood through conventional views on how communication happens in the brain. And so again, they're gonna have to go back and think about it. But at NES, wireless communication is what we've talked about for decades. And it's the foundation of the company, this idea that the body has this wireless communication system. So these are some of the things that I have found really interesting over the years and that I like to continue researching and finding.

So as just a really high-level, because I know we're limited on time and we have a lot to cover, but just at a really high-level, you and I have talked about some of these things in the past, but I just want to go over them here for everybody who's watching to show how much even conventional research has already demonstrated the impact of physics, not chemistry, but physics on the



body. I mean, we know that because the sun shines on your skin and you make vitamin D. I mean, we know that the electromagnetic spectrum has this huge impact on the body. Here's just some articles I found specific to light and how it can manipulate us down to the level of the genes. Sound can do the same thing. And I'm, again, going high-level quickly through these just to give people an idea of what all is out there, the impact of magnetic fields on the body. Here we have pulsed electromagnetic fields. And again, this is just a collection from PubMed. You can go and research these types of things on your own and just find out how many different situations in the body can be affected by things like pulsed electromagnetic fields, or for example, here, microcurrent technology. And both of those is, you're familiar with our MiHealth technology, it uses both that PEMF and the microcurrent, as well as some things that are specific to NES combined with them. But that's just really an idea for people to have of the conventional research that's out there and how much we need to learn about the body, how much can be taking place beyond just the traditional chemical model. And I think that's the bottom line, what I want to get across to people.

Greg Eckel, ND, LAc

I love that. And that is a message that really is coming out in the whole summit, where these terms of like, oh, that's really out there or woo-woo or whatever. When you hear that, you really have to understand, people aren't actually reading the research because the science, this is actually hard science that is coming to fruition. And that first article you showed was 2007. There's literature way before that as well, but for your introduction. And that part, that's why I was really excited to see the title of this talk with you because you really are in the research and bringing it forth, and helping us really assimilate it because it is changing so rapidly.

Where you had the electricity in the cell, you had neuronal connection that wasn't happening before, you've got the frequencies of the PEMF, the low TENS unit component, electrical input. You have the sound vibrations and effects on DNA repair. That's hardcore in the science realm and bringing it from that bioenergetic realm. So basically, we've got the science there, medicine hasn't caught up. And so there are some ways of measuring and then actually employing and utilizing these therapeutics. So let's start with measuring, the testing and assessments. What are companies doing out there right now in terms of the bioenergetics and utilizing assessments? Because what gets tested can get measured and changed. So there are different ways of looking at this. So what did you find with setting up your clinic and then just now in the industry?



Steve McCardell

Yeah, so when I first started, obviously, I wanted to know, what am I gonna be using to work with clients? And so I researched a lot of different equipment and I bought a lot of different equipment. And I tested it myself and found out what I did and did not like. And so it's really important for people to understand if they're going to see a clinician who's using any of these, the groupings of different types of assessments. So I don't go into brands so much. I talk about these general concepts. One of the early versions of assessment in the bioenergetic world is often called EAV or Electro Acupuncture according to Voll, who was a fellow who helped to develop this. But it's really, if anybody's seen these point probes that you basically put on the skin and you take an electrical measurement at, really, an acupuncture point. You're trying to find out where there's blockages within a specific acupuncture point along a meridian. And I liked the concept of that, honestly. I owned one of those systems, one of the top-end of systems. I liked the concept.

What I didn't love about it was that, number one, hey, I love the idea of the meridian system, but with NES what I found is we do talk about the meridians and we talk about a lot of other things, and in this case, it was just the meridians that you were dealing with. On top of that, it took a long time to assess somebody, and it actually wasn't that comfortable. I realized I was not gonna be able to do this on little kids because that point was actually uncomfortable. And in theory, you could do it just on the fingers. It would take a while to do 'cause there's a lot of different points you have to test on both, but really you should also be doing it on the feet. And so it's a long assessment. And the other thing I didn't love about it was that honestly, the exact placement you have and the position it's in when you put it, and then you sort of tip it to get a reading differential, all of these things, there was so much variability in how the practitioner actually handled it. And so it could be manipulated, readings could be manipulated a bit by the practitioner.

So I didn't love that. And I ended up getting rid of that system, even though I think there's something to it, I think there's some value there, but there were some things I felt were limitations. The galvanic skin response is another of the really popular options. And that is basically sending in electricity somewhere on the hand, usually into the fingers, and then taking a reading maybe from down here. And what they're doing is they're saying that they're looking for a differential between those, and that represents a stress response by the body. And they say that this galvanic skin response is the same technology as is used in lie detectors. So that sort of helps to legitimize it. Interesting point about that is that when we did some research into actual lie detector tests, we found out that they were not testing things more than once every three or



four seconds. And these devices actually test many, many, many items per second. And so that was a little suspicious for me. But I did own, again, one of the top-of-the-line GSR devices. And you know what I found Greg? I found that I could manipulate the reading with little movements of my fingers during the assessment. And so I had a lot invested in it. And so you can imagine, I have a financial interest in this thing working. I ended up having to sell it for a huge loss 'cause when I realized that any movement of the finger would manipulate, would literally tell the system, hey, this is a stress response, hey, you need to address this in their body. And I'm thinking, well, what if somebody's just uncomfortable and they're moving after holding their hands there for two or three minutes?

So GSR, galvanic skin response, that's another type of assessment that's out there, that was the limitation I found with that. I could literally decide which stress items I wanted to show up and make it happen. So not my favorite of what is out there. I have less confidence in that than in something like the EAV system that I described before. There's another one that's pretty interesting, gas discharge visualization. It's really a form of Kirlian imaging. And you put your hands basically over these plates and you get a reading based on light emitted from the finger, essentially. My reading of it is that they're attempting to pick up, again, meridian points, ends of the meridians that end up in the fingers. And because of that reading, again, I'm gonna say there's a little issue with it's not as holistic as what I ended up loving about the NES system. It seems very interesting. I have used them before. I never owned one. There seems some potential there.

But again, it's gonna rely on that exact placement of the finger, for example, and what it represents. So there are some limitations that to me are a little similar to the EAV. But again, it's like people are exploring these different avenues with bioenergetics and I think that it's really important because we're in the early stages of moving out of just chemistry for medicine and moving into something new. How do you work with the energy body and make an accurate assessment? So those are some of the other things that I've run into. And then of course, you end up with a system like what NES has, which is the company that I work for now, and that's what I call field-based. And that means you're interacting with a field that's generated by the body. You're bringing an electronic field into interaction with the body-field, and through that interaction, you're able to take an assessment. What I love about that is that there's no opportunity for manipulation, like I said, by the practitioner and how a needle is placed or placement of the hand or anything like that. It is two fields interacting. And so there's no opportunity for manipulation or misplacement and it happens rapidly as you know, you've experienced that. It happens within a matter of seconds. And so that's what I do like about it.



And if you don't mind, I'm gonna just show just a couple of screens just so somebody can see what that looks like. Because-

Greg Eckel, ND, LAc

Yeah, I think that is helpful because it's hard to know, I mean, you've done a great job of explaining those, but let's see what the actual assessment looks like. So that's great.

Steve McCardell

Yeah, because exactly, what I'm saying is it's limiting when you're just dealing with the meridians, which you and I both agree, that's a great system to work with. What else could you be looking at? And that's what I think is worth sharing. And so let's see if I can get to this screen here. What NES does is it starts by actually looking at how the body-field is interacting with its environment. So that's one of the things that we're doing, is we're saying hey, you're not just this individual unit. You're looking at, the earth itself generates fields, and you're interacting with food and water and oxygen and all these things. So we look at that. And then in the screen that you see here, I know it's very small, it's just really to give people an idea of what it looks like, you're looking for the purple and orange items, where those are really priorities, where the body needs support. As you know, we don't go in and say, "Oh, you have liver disease," because liver field is showing up. It's literally just saying, "Hey, there's some compromise to this strength of the energy field around the liver," and we wanna support that approach. But we look at how well powered the overall field is. It's like, you and I were just joking about how, oh, modern technology, it's gotta be actually plugged in and turned on.

Greg Eckel, ND, LAc

Yeah, right.

Steve McCardell

Our bodies too. Everything needs to be energized if it's gonna do something and that's true to body-field. And so we look at that as well as what you and I have talked about here like the meridian system, we have a very similar thing called the integrators. Then you look at the energetic immunity system, not only the everyday operations that the meridians work with, but what are called divergent meridians, which I'm sure you're familiar with with your background, divergent meridians and their role bioenergetically in actually correcting tissues in the healing process of the body. And then key that we talk about a lot, I know you are really aware of this, and that is the whole emotional component, the stress, shocks, traumas, and how those live in the body and actually affect us biologically. And so we do look at that as well. So that's just a very



high-level that, we do have a lot more screens of course, but that's a very high-level idea of how we go beyond just meridians and why I liked that system as a practitioner beyond just sticking with some of the other systems that were out there.

Greg Eckel, ND, LAc

Let's go a little bit more in depth on that because it's important, I think, to make that distinction because there are pluses and minuses for each one of those that you went through. There's certain research studies that are just using the GDV, the gas discharge visualization. And that's good. There isn't an agreed upon measurement, and I think having different facets in a bioenergetic world is important to understand. We're not just saying it's one or the other. Now you're with what NES is doing, I find is a very comprehensive read, on multiple different fronts. So it's using multiple looks at the same biofield from different angles, let's maybe say it that way. How do you explain that difference of the biofield, bioenergetic read that you are getting with the NES system, how do you describe that to just the general public? Just to get a sense for folks listening, viewing, how does Steve McCardell do that?

Steve McCardell

Well, it's hard to keep it so simple because I wanna dive down into quantum physics, right?

Greg Eckel, ND, LAc

Yeah.

Steve McCardell

At the end of the day, we tend to think of the body biochemically, and that's nutrition and medicine are all based on chemistry. But when you get down below the level of chemistry, well, how does chemistry work? Well, you have the exchange of electrons between molecules and that builds things. Well, that gets you down to the level of independent energy particles and all of those produced fields, it's really interesting, I know we think of particles when we talk about electrons, protons, neutrons, the things that make up an atom, but dating back 100 years, they've had wave models for this. And I know that sounds like it's going too deep, but it's like, yeah, it seems like a particle, but in fact, it's just the center point of a wave that's going out and a wave that's coming in. Information going out, information coming in. And all these waves are interacting and creating patterns basically in space. And so a unique atom, a unique molecule, a unique cell, each one, all those combinations of interacting waves, create a unique biosignature, essentially. It's a field that's being emitted. And that's what we're going in and we're saying, okay, the individual cells do this, but then the body as a whole carries that information out from it.



Even our voice carries that information out from us because it's acting as a carrier wave of the information. And so no wonder when we're just near somebody, they can feel good or feel bad based on what we're emitting, or our voice can affect somebody in a positive way or in a negative way. Tone, all these things, they carry information. They're actually interacting with people in ways that I think a lot of people don't even understand. And so it's really interesting. That's really what we're doing is we're getting down to the information that's carried out by these fields that are emitted by everything in the body.

Greg Eckel, ND, LAc

Yeah, thank you.

Steve McCardell

Not a two-second explanation, but-

Greg Eckel, ND, LAc

That was awesome, actually. That's what I was looking for because sometimes when we talk in too much vaguery, it's hard to get in on it. So yes, there is a level of complexity that needs to be explained and I think you did that really, really beautifully. So thank you for that.

Steve McCardell

Well, thank you. And I wanted to add one thing 'cause there's one new type of device that I think you're aware is in development right now. And I wanted to touch on that because you have a background in Chinese medicine, right?

Greg Eckel, ND, LAc

Yeah.

Steve McCardell

And how much have you used pulse to make assessments yourself? Is that something that you've done in your clinic?

Greg Eckel, ND, LAc

Oh yeah. So I've been taking pulses for over 25 years that I've had to go out and study with masters around the globe. And then I've been able to, you can quantify that in an electrical pattern and correlating that in on with a pulse prototype. And I don't like to admit it, Steve, but it is a better read than my actual pulse-taking by my fingers. So there is technology that reads off



of the electrical signature of the pulse of the human being. And so that's been my early discoveries with the pandemic, looking for ways to get into somebody's living room, not in a creepy way, but in therapeutic way. And now with people coming back into the clinic, it's correlating those things together and it's like, wow, this is really well-put-together. Yeah.

Steve McCardell

Right, and what's interesting, you have a lot of devices out there that are measuring people in terms of heart rate variability, blood oxygenation, I mean, there's a bunch of devices that do that, right?

Greg Eckel, ND, LAc

Right.

Steve McCardell

But now under development, NES's sister company, really, is I think the first technology I've ever heard of that's using this idea of Chinese medicine and saying, hey, within every pulse, there's a lot of variability and it tells you what's going on in a totally different way. And that's a great example of where different types of assessments can compliment each other because that will be inherently a different look than what NES is doing with everything else or what GDV is doing. It is inherently a different look. And when you combine those things, then yes, you can potentially get more holistic pictures.

Greg Eckel, ND, LAc

Yeah. Yeah, that's great, I'm glad you mentioned that one too 'cause that's the new one on the block, but it's showing tremendous promise. So we've got these assessment components, then I know our viewers and listeners are wondering, well, what do we do with that assessment? Is there something that we can help people with their health? And there are different routes of going after that. So I want you to dive in there.

Steve McCardell

Yeah, well, the two primary pathways you have is, in terms of remedies, there's, of course, lifestyle. So some of these assessments can give you direction on lifestyle in terms of exercise, sleep and those types of things. So there's that side. As far as what you might use in terms of bioenergetic solutions for somebody, you really have the oral approach, which would be nutrition and supplements, of course, herbs, as well as bioenergetic options, more like homeopathy, where you're dealing with the body at the level of the body-field, and what NES does with Infoceuticals.



So let me touch real briefly on those and then we'll talk about the other route, which is really technology. There's a lot of different technology solutions out there. So nutrition and supplements. We like to say that those are working chemically with the body. Now truth be told, anything that's working chemically with the body is working bioenergetic. 'Cause for the same reason I said about the body, everything is emitting information. And so it's not just a chemical discussion. Every chemical discussion is also a physics discussion or a bioenergetics discussion, but we think more chemically about those. But a lot of these assessments, even the NES assessment, has a nutrition page where we do look at how the field is interacting with various nutrients in the body, that type of thing. So there's always that component that a lot of them will deal with. And then you have, of course, herbs, which goes with that idea of supplements. But I wanted to bring out herbs specifically, and have a conversation about that and homeopathy for specific reasons.

So here's what I mean. Herbs are still chemical, but they create a hormetic response in the body. They actually test the body. It can be a mild toxin. Actually, a lot of what we consider antioxidants are mild toxins and it's the body's response to it. It's like being stressed, sort of like when you're stressed by exercise, that's a hormetic stress. Your body responds and grows stronger as a result. So that's a good type of stress to have in your life. And so homeopathy works in a similar way. It's this diluted, down to essentially a field or information, but it's diluted stressors. And so when it's introduced to the body, it's done so at a very mild way so that the body can respond with a healing response and grow stronger. That's the idea of it. NES works on that bioenergetic level, that is, it's information in a bottle, so to speak.

It speaks to the body through resonance. But instead of doing so as a stressor, it's actually a support mechanism. It reminds the body through correct resonance, that is, the frequency of a healthy cell, for example, and reminds through resonance where something needs to be, and it helps the body come back to where it needs to be. And so again, you could actually combine the hormetic stress of a homeopathic substance along with a NES Infoceutical and have both sides introduced to the body. The stressor is there and the answer that the body needs to give is there, so it's guided back to where it needs to go. So that's just how NES is a bit different. It used the option of what we call positive information as opposed to negative or hormetic stress information. So that's high-level, some of the oral options when it comes to bioenergetics.

Greg Eckel, ND, LAc

Love it. Well, so then let's get into the technologies as well.



Steve McCardell

Yep. Technologies. So a lot of people are familiar with things like red light therapy, infrared therapy. I mean, we've got these infrared saunas and things like that so a lot of these things are pretty popular. And that is light interacting with the body and generating positive results. Now those aren't necessarily going to be recommended by one of these assessments, but I just wanna bring up this idea of various physics solutions or bioenergetic solutions that could work with the body. We're familiar with even something as simple as blue light blocking glasses so in the evenings, you're not having computer screens, TV screens, trigger the wrong hormones and keep you from falling asleep at night. So there's some of that. And then there's different technologies within bioenergetics that aren't even associated with an assessment. And I take Rife, for example. Are you familiar with Rife machines?

Greg Eckel, ND, LAc

Oh yeah, yes.

Steve McCardell

Yeah, yep. So Rife, the whole idea of Rife's system, which he developed, I think back in the 30s, the story around Rife is that he had built this tremendous microscope and could see things happening at the microscopic level that we haven't been able to since. And so that's a story I can't personally validate. The idea was his career and equipment were destroyed. And I've now seen they're developing microscopes that have a similar power. So we're actually gonna be able to test some things that we haven't been able to in the past 'cause usually to get down that small, you need an electron microscope that doesn't view things that are still alive. So the idea was he was able to look at how frequencies were interacting with things like bacteria, and he could tune a certain frequency and supposedly destroy it. And so Rife frequencies are all about really killing pathogens.

It was not about positive information. It was about negative information. But negative information for those pathogens, the way you might resonate with a glass and shatter it, the idea there was to resonate a pathogen and kill it. NES has not opted for the kill stuff approach, not saying that that doesn't have a role, again, there could be a complimentary role there, but what NES's approach has been is introducing positive information because a healthy terrain in the body potentially can throw off those pathogens on its own. You need balance of the different microbes in the body. So there's that. And then there's other systems that do claim to use frequencies that are optimizing the body. With NES, we do something similar to that, but again, it goes back to that complex of frequencies I was talking about. When you have a whole



molecule or a cell, you have all these energy particles all interacting with each other and producing a very, very complex frequency set. And I use the term frequency set, just to say, it's not 480 hertz or something like that, it's this other thing, it's a complex set. And that's why NES's approach, its research in the past, involved this matching process to say, well, what can we get that resonates with a liver cell, for example, because we think it's more complex than just a frequency. It doesn't mean you can't find a frequency that benefits a liver cell, but we really looked at it as it's more complex than that, So there's frequencies, there's optimizing frequencies and there's then optimizing frequency sets, you might say. So there's all of that. There's meditations. We know that meditation, there's a lot of research going on right now in the world of meditation in terms of the benefits that can have.

And one of the things that NES has explored specifically is, well, how can you combine meditation with some of these other things we're talking about? So for example, in our system, we combine a meditation with, and it's a guided meditation, so it's an audio track. But remember, as I said, our voices are sound waves. They carry information. In the same way, you could use the audio from a guided meditation to carry corrective information into the body. So we actually combine some of those different types of ideas. And on that note, ending with that same type of system we were talking about with the pulse analysis, that equipment is actually going to imprint directly into the body. So what NES does is it imprints into water and people take water solutions, or it uses our bioelectric technology to MyHealth. We introduce information into the body with this. In a similar way this gem that is going to test pulses, it's also going to have a little magnetic disc and lights that can introduce those same type of information sets or frequency sets into the body right on the spot, and it's gonna be able to combine that with things like meditations.

Again, that system is really gonna be about optimizing emotions and bringing somebody into a healing state. 'Cause what did we talk about before? That role of stress, trauma, shock, and the implications on biology. Well then, we need to get the emotions into a state where healing is ready to take place. That's one of the keys that keeps a lot of people from actually getting well. So big picture, just of the oral approach, the technology approach. Obviously, again, we're in baby steps. I mean, we're in the very beginning of bioenergetics. I think NES has been doing this for 20 years publicly and researching for decades before that. But when I say we're in the early stages, I see this for the next century and beyond. And this is where some of the research I know you've talked about in other talks within this summit, those types of things are gonna be necessary to carry bioenergetics out into the mainstream and complementing the role that biochemistry has.



BIOENERGETICS SUMMIT

Greg Eckel, ND, LAc

To have these things coming into clinical ... I really appreciate it, Steve. So any words of putting somebody into action around their topic? So I know I'm springing that on you at the 11th hour here.

Steve McCardell

Great, I'll take it. Well look, in terms of just learning more, a lot of the research that we've done, and again, as you said, there's research on GDV there's a lot of research out there, go to PubMed, research some of these things. NES puts its research right onto its website under our information tab. So I encourage people to go and learn more about that. You mentioned the book that I co-authored with Harry Massey. I mean, get a copy of this. This is available on Kindle, *Restore Your Energy With Bioenergetics*. Or go find one of our practitioners. And if you create an account under them, you can actually get a PDF of this for free from within your account. You can go to neshealth.com/plocator, for practitioner locator, if you wanted to find somebody to connect with and be able to log in, get this. That's a great action step, actually, because we built into those accounts, if you connect with somebody and you feel a resonance with them and you can go get an account for free with them, you can download a PDF of this. We also have some of that imprinted music I talked about that actually carries information on the music. There's videos, there's all sorts of stuff in there that is a great way to just continue learning about and experiencing bioenergetics.

Greg Eckel, ND, LAc

Lovely. Steve McCardell, thank you so much.

Steve McCardell

Thank you, Dr. Greg. Appreciate it.