

Electropollution: The Silent Carcinogen

Andy: Electromagnetic fields, 5G, smart meters, dirty electricity. These are words and phrases we hear all the time about things we should be concerned about in our own households. But what do we do? How do we start to make our homes healthier? Well, today we're going to talk with Brandon LeGreca who is an author of a book called Cancer and EMF Radiation. He'll join Jay and I today to discuss things we can do around our home to protect us against these and other serious issues.

Hello everybody, this is Andy Pace. This is Non Toxic Environments. And before we get going with our interview today, just wanted to set this up. You might know that I'm on the board of directors of an organization called the Building Biology Institute and it's really the organization here in the US that's creating setting the standards on electromagnetic fields that we should protect against in our own homes. And I've been hoping to speak with an expert for quite some time now, to get somebody on the show to talk about EMFs. But I'll be honest with you, the lot of the experts that I know and I trust, they are so knowledgeable that sometimes the information comes across a little too difficult to process. And, today though we have Brandon LeGreca coming on the show and Brandon is a local customer. He is a licensed acupuncturist. An expert in Chinese or Oriental medicine. And has a really fascinating story to tell about why he kind of went down this road to write about EMF radiation. And what I really like about Brandon is that yes, he's also another one of these really knowledgeable experts on the subject, but he has a great way of putting it in layman's terms and in ways that I can understand and I can then relate to my clients. So I hope you enjoy the show. Jay and I talking with Brandon LeGreca.

Andy: Brandon and is so great to have you here on the show. Jay and I've been talking about these topics for quite some time now, probably since we started the show. And even before that, it is obviously an incredibly, incredibly important topic of discussion and you're... the direction you take it is from not just an interested consumer, not just a knowledgeable expert on field itself, but from a whole medical side. You have a great story though to tell us. So please, introduce yourself to everybody here.

Brandon: Oh, thank you Andy and Jay for having me on your show. It's a pleasure in Andy. I've learned so much from you as a pioneer environmental medicine. So I'm happy to humbly share whatever I can on this topic.

Andy: Awesome. Yeah, thank you.

Brandon: So I come at this topic as a clinician, I have managed an integrative medical clinic here in Southeast Wisconsin and have been a practitioner of traditional Chinese medicine for the last dozen years. And I've always had this kind of vague notion that there was something missing from what I was taught in graduate school. And there's a lot of beautiful things to say about Chinese medicine, but the one piece that I think is absent is an understanding of the environmental influences and how drastically our environment has changed in the last specifically 50-60 years. The topic of electromagnetic fields is one of them, but there's many things we can say about that.

And so this all came to a head and became very real for me in 2015 when I had gotten a cancer diagnosis. So I was happily going about my, my clinical life, my home life until this, this big thing just hit me. And so, and because the diagnosis was lymphoma and of all the cancers, I seem to think lymphoma has one of the strongest ties to environmental pollutants. Obviously it's your lymph that is trying to filter things out that are coming in from the outside. So with that knowledge, I really dove deep into environmental medicine and you know, I feel like of all the topics that I can write about, and of course this book that I've just recently written is, even though the main audience is the cancer population, I felt like this was the elephant in the room. This is something I wanted to tackle first. Really the book just came out of a series of blog posts that I had written previously. And then I just kept coming to call upon more research and more research and more research. And before you know, it just kinda grew into a book and there you go. So that was the start of it.

Andy: The way your book has put together, it makes it a lot easier for the lay person to understand. Don't get me wrong, there's a lot of technical information in the book.

Brandon: Yeah. By necessity.

Andy: It's out of necessity. And I think the problem exists where there's a lot of misinformation out in the world and we have to sometimes re-educate and then provide the correct information. That's what Jay and I do on a regular basis here.

Brandon: Yes.

Andy: And your book does a wonderful job of that because you understand now what the true problems are... individual issues in the home that exist. You lay out some really good plans on how to put together the strategy to take care of those issues.

Brandon: Absolutely.

Andy: And it's folks we'll be sharing information about Brandon's book. It's called Cancer and EMF Radiation. We'll be sharing information about the book on the show notes and through our emails for those who are subscribed to the show. There's even going to be a contest on winning a free copy. We'll put that information in the notes. But if you haven't read the book already, folks, this one is a must read.

Jay Watts: Brandon, this is Jay. I just need an idea, of a question that popped into my mind as you would you two were talking there. Maybe you're going to address this later in the podcast, the idea was... is there much like there's climate change deniers, are there EMF exposure deniers? I mean, are people kind of skeptical of... or is there enough research and enough anecdotal and enough proof that this is something really serious? You understand what I'm kind of asking? Are there skeptics out there? Again, all, it's a bunch of hooey? I think maybe part of that is our incredible attachment to all our electrical stuff. Yeah.

Brandon: Yep. That's part of it.

Jay: So yeah, go ahead and I just wanted to hear what you thought.

Brandon: I mean the, the biggest deniers are just the actual telecommunications industry. And I point out that it really, this whole thing is kind of going down somewhat analogous to tobacco companies and cigarette smoking where in the early days we had magazine ads, which doctor

was was touting this brand of cigarettes and it's really the same thing. And now we're seeing the rollout of 5g telecommunications industry are the first ones to plaster all over billboards, how great their services and they claim that radio frequency radiation is safe, but they've been saying that for decades despite mountains of research. So it makes you wonder a little bit how much their vested interest in their industry is playing into that as a bias. And certainly there is some controversy along those lines in the research as well.

So you know, and to your point, Jay, there are your technophiles who just love everything and want their house to be wired or wireless to the gills in everything communicating. So those people are going to be akin to someone who is addicted to cigarette smoking. They're not going to be so keen to want to look at evidence to suggest that there might actually be harm. I'll tell you a funny story, kind of the early days of my research into this subject, I kind of field tested this material and I did a live lecture to a computer club in the area and it didn't go over exactly as I'd planned. And in retrospect, it probably wasn't the smartest move in the world because here I am walking... it was analogous to walking into a bar and saying, you're all a bunch of alcoholics and you need to kind of cut down on this a little bit. And I just walked into a room full of people who were absolute computer tech savvy people and said, you may want to reevaluate your relationship with technology. So obviously those people are always going to exist. And we just have to do our job of educating people with the evidence that we have at hand.

Andy: Brandon, that reminds me of a quick story. When I was, this is probably 18 almost 20 years ago, I was giving a presentation to the Paint and Decorating Contractors Association of America. And I made the mistake; I called it a calculated risk to mention to the audience of 150 painting and wallpaper hangers, contractors. I said, well, you realize that there is a documented connection between painters and substance abuse because a lot of the chemicals found in just everyday water-based paints are actually classified as narcotics. The room went silent and maybe went on for another 30-45 seconds on this topic and then dropped it. After the talk I probably had half a dozen people come up to me, kind of sheepishly, without their friends being and said, you're spot on. I have several friends that are alcoholics that have died from alcoholism, others that are on harder drugs. Understand that painters are the first ones to be on the job site in the morning and because they, they need their fix when they're not getting the fix there's substituting with other narcotics and so I feel your pain there when you drop

some knowledge onto a group that probably understand and they probably agree but they would never ever let you know that.

Brandon: And another point to this, I guess most deeply concerned about, again, it's similar to cigarette smoking. I mean no one at this point would question that cigarette smoking is THE leading cause of lung cancer and it's because we're on the other side of that research curve. You know, we have enough epidemiological research, we have enough decades of people clearly getting lung cancer from cigarette smoking. No one would question that. But wasn't all that long ago was probably 15 years ago when I was traveling through China and working there in the hospitals where I saw medical doctors smoking in the hospital rooms. So it makes you realize, China is on the front end of that curve. We're on the other side. My thinking is, we have to be a little bit more forward thinking about this issue. We have to look at the evidence and say, okay, probably the most clear risk we have when it comes to radio frequency variation, specifically cell phone use is brain cancer. Now we're on the front end of that curve. Is it going to take another 20-30 years just like cigarette smoking before we really realize that we are seeing dramatic increases in brain cancer on the same side of the head where you're using your cell phone. That's my main concern. We have to be a little more forward thinking and how we approach the issue.

Andy: You know, I think we'll all help is... I just read a story that came out this morning that Switzerland was one of the first countries in the world to deploy 5g countrywide. And they have a hundreds and hundreds of 5G antennas up across the country. I think somewhere in the neighborhood of 350. There still hasn't been definitive health studies to show that 5G is any worse than 4g. Now, I'm not saying that as an excuse that say that 5G is okay. Contrary to what people have written about things I've said in the past, I believe that 4G is bad too. To me wireless communication is bad news when it comes to human health issues. I think what's going to happen, Brandon, to your point is as soon as we have that, some of these studies coming back, it will start to click. Now beyond though the whole wireless communication issue, electromagnetic fields are what we find in the home are created from appliances, from wiring, from dimmer switches, from lamps and so forth.

And these are the things that, not only do we not need research studies for, but these are things you can take care of this afternoon when you get home from work.

Brandon: Absolutely. Yeah.

Andy: Talk to us a little bit about that. I know there's a lot of focus done on the wireless communication, but from what Jay and I see inside of the home, what are some things people can do around the house just to make it a healthier space, electromagnetic wise?

Brandon: Sure. So first let's define our terms. There's three main sources of electropollution that most people will encounter. The first one which we've talking about all along is radio frequency or microwave radiation. That's your cell phone, your wireless Bluetooth cell phone towers, cordless phones.

The second is extremely low frequency and this would be the 50-60 hertz frequency that we are being exposed to from just your household wiring. Electrification as it's as we've had it for the last hundred years. So we think of that and measure that as alternating current magnetic and alternating current electric.

The third one is voltage transients or the other name for this. Some people might have heard as dirty electricity are basically harmonics on top of your clean 50-60 hertz energy coming into your house that's in the kilohertz. The low megahertz range and all three of these different kinds of EMF are measurable.

This isn't where you can make it up. You can buy meters to measure all three of these kinds and all three of them have their own different kinds of ways that remediate them or mitigate them. So I would say the one that is in some ways the easiest frankly is the radio frequency. Most people have a wireless router in their house and they're broadcasting 24/7 when we just recently bought a house and we moved in and before we did, I brought someone on who is an expert in networking and we just ran Cat 6 ethernet cables throughout the entire house. It really wasn't all that difficult. It was a days worth of work for sure. But now everywhere that we have a computer set up we have ethernet cables. It's very reliable. It's very fast, it's very secure and there is a way, there's lots of resources out there that you can take ethernet connections and use that with mobile devices. So there's a way you can make connections for, for instance, a tablet or a or a phone that you can use it without wireless at all. And it works pretty flawlessly.

Andy: That's really the one thing that people talk about when they say, if we get away from wireless we're so beholden to our mobile devices and using just a connector, something you can probably get a Best Buy or Amazon, you can hook up to a wired connection and eliminate that as a possible carcinogen.

Brandon: Absolutely. Yeah. Even if you are so utterly convinced that you can't live without your wireless router, at the very least, put a timer on it and shut it off. One, you're sleeping right now. There is at least some very good evidence that one of the mechanisms by how radio frequency radiation causes cancer is it suppresses melatonin and melatonin is the hormone that our pineal gland releases to help us wind down to sleep peacefully and it also acts as a potent antioxidant to clear up free radical damage. So even if you could just shut it off at night, which again, you don't even have to micromanage: buy a simple \$3 timer from the hardware store shuts off when you go to bed, turns off when you get up in the morning would be a compromise. Now we didn't choose to do that in our house, but that's something that you can certainly choose to do.

Jay: That's what we do. That's when my wife and I do, we just shut it off at night. We shut it off most of the time we only turn it on when we're going to be doing anything and then the rest of the time we keep it shut down.

Brandon: That's another option. Just have a switch on it, turn it on when you need it. You know, you're using a 20-30 minutes, turn it right back off again. And I would say that's probably where most people are being exposed to radio frequency radiation. I mean, obviously you could live next tower and that's not ideal, but you have control over what's inside in your environment.

Andy: Well that's true. The question we get quite often as we're building a new home and we just want to protect ourselves against the cell tower that's a mile away. I like to know data and I like to know what we're trying to actually protect against. So I like to have somebody come in using the correct meters to find out what we're dealing with and then we would recommend, even walk the land... where is it coming strongest from? How should you situate the home on the land to shield most of that? There are things you can do in construction, either by putting

up something like a Denny foil aluminum foil in the wall that'll block RF.. window films to block RF. You can even put up a netting material, essentially create an a cage around your bed that completely blocks you from any of that. So there are ways to do that. The thing I always think about is a hundred years ago when electricity first started getting wired across this country, Americans had a life expectancy of about what, 43 years? And today our life expectancy is 30 years greater than that. To Jay's question earlier, when they deny that this is a problem, this is the one thing I always think about is that if you make the argument that says that electricity is bad... since the days of modern electricity to now our life expectancy is getting longer and longer, that's essentially their argument back is, if it's so bad, then why are we living longer? I really appreciate the way you put this Brandon and the information you're providing. Medicine has gotten better. Medicine has extended our lives. Our diet has gotten better. Just our ways of living. We're not living such hard lives as we used to a hundred years ago, but we've gotten to this point now where for the first time in a hundred years, life expectancy of newborns now is, plateaued, right? According to the experts. This is where, where I think that modern living, and wireless, and everything at your fingertips is now becoming a problem.

Brandon: Yeah, absolutely. And furthermore, again, it's funny, people often ask me, I've been interviewed a lot about this book. That one of the questions that comes up, and I can kind of understand the question is, do you think that EMF specifically caused your cancer? And I have to honestly say, no. For the kind of slow growing cancer that I had, it probably developed when I was a kid before a lot of this really got ramped up. So people think I have a bone to pick specifically and that's why I picked EMF to write about. But I have to say, cancer is such a complex issue and it has so many variables associated with it, so many environmental aspects to it and epigenetic influences. And so really my main thesis here is to, is to say to people, EMF is one source of electrical pollution. It's one source of being a carcinogen. And you have to factor that in. So if you were someone who was recently diagnosed with cancer and you're looking to clean up all the different, these things in your environment, this is just one aspect of many. And it may not even be the bigger driver. I mean, for all we know, it could just be having a diet full of pesticides and herbicides. It could be a body care products, it could be, formaldehyde exposure, mold exposure, radon exposure. We can go on and on and certainly Andy, you have done a great job, you know, teaching people about a lot of these things. But the point is, is this is one more thing we have to kind of add to the tally now is something to look at as being a potential carcinogen.

Andy: Well, it comes down to if we have knowledge on better ways to do things and it's not really inconveniencing you, well why don't we just do it? Why don't we just take these, you know, make these changes in our lives?

Brandon: Absolutely.

Jay: Oh, that's common sense, Andy. My God, let's not employ common sense. Do you guys have smart meters out there?

Brandon: We do in Wisconsin pretty much everywhere across the state. To my knowledge, they are digital meters. Now, some of those digital meters are weaker in a sense that they only transmit to the road and that's found more rural areas like where I am. And then more in densely populated areas, they have what I would call a true smart meter, which they're a little bit more powerful. They transmit a little bit further away. They're read at a distance. Even here we still have a car that has to drive down the road to get signal. So there's different kinds of digital meters. They all generate some form of RF radiation. They've been blamed for just about everything. They are a source of radiation but it's sometimes hard to justify, one thing is being horrible and when you know a person is still talking on their cell phone in the other room. In some ways we kind of have to, as people in the field, we have to kind of parse out again, you know, what is the real problem? And I think the solution here is really get down to the evidence, get a meter and measure. You can very clearly measure how far signal from a smart meter is coming into your house. If it seems to be a problem, you have two options. You avoid being basically on the other side of that wall in that room where it's going to be the strongest, or you could shield that part of your wall and that in that case you've talked to someone like Andy or another EMF mitigation specialist. But I think one of the bigger issues is where you have an apartment complex where you have a whole bank of smart meters together and it's the person who's on that unit, on that wall and the other side who is really being most strongly effective because then you've taken whatever that radiation is from that smart meter multiply device, 6, 8, 10, those meters all going off at the same time. That's the one I'm particularly worried about, looking at people's houses and and such and where they live.

Jay: Yeah. The city of San Diego some years ago had a big push on smart metering and so, they come out, install the smart meter and so we thought, okay, this will do that. Well, the meter in our little house is right outside our bedroom, literally less than three feet away from our bed. So once we got clued into the challenge with this stuff, we call it a utility backup and we said, get out here and take this thing out. Which of course they're resistant to do on my God, you don't realize this, we don't care. Get it outta here. And of course they'd wound up charging us a little fee, but we went back to the analog. So if somebody comes in my yard and does a reading, like they used to in the old days. We just decided hey, let's not take a chance. But I think you're right. I think it's, it's that, and there's so many other sources and we need to be aware of all the different sources and certainly these ideas you've been sharing here with us about how to mediate is really, really important.

Andy: So, Brandon, how do you utilize, or do you use this information now in how you go about your acupuncture? Because I know so little it except it's been done on me. And, I know that both acupuncture or dry needling in the PT world; we're always looking at ways to change these micro-electrical currents within the body.

Brandon: Yes.

Andy: So you utilize some of the, the research and knowledge you developed on this in your own medical practice?

Brandon: I do. It's actually funny you should bring that up. Because I think in some ways, part of my interest in electromagnetic fields is because I do kind of akin acupuncture and my work with people like I'm an electrician and I'm using these needles and I'm stimulating points and I'm flipping switches in some areas and causing changes in another. And certainly we know that's true even from the research of acupuncture and acupoint basically where we're stimulating is an area of the body that has a lower resistance, higher conductivity compared to the surrounding area. So there's something electro sensitively unique about acupuncture points and we're quite sure at this point that these signals that are transmitting in the body have some relationship to polarization of the cells and such and how they conduct electricity. Certainly now if you look at more modern research and things like the healthy size of the healthy side of EMF, like a PEMF, which is pulsed electromagnetic field therapy, we're actually using certain

frequencies to actually cause certain beneficial healing responses in the body. And this has gone back from Robert Becker's work from decades ago. We've known that obviously not all EMF is bad. We live in environment where we have an electromagnetic field surrounding the entire planet. You know, now that field is DC as opposed to AC. But we've evolved with these frequencies, certainly even infrared from the sun and ultraviolet. So our body is dependent on being in a certain kind of electromagnetic field environment. And so that's part of where I kind of start the conversation with my patients is saying, okay, well you're having sleeping problems. Maybe we should think about one, getting sun exposure during the day two, shutting off all your devices at night, taking maybe your alarm clock, which is too close to your head and usually alarm clocks and one of the worst offenders. Maybe moving that a little bit further away from where you are so it's not blasting your head as you're trying to sleep. Again, you can measure that with a meter. All things like that. Just getting to get people in tune with what their exposure is and how different that is from the ancestral environment that we've evolved in.

Andy: It's really a fascinating way to look at it. Brandon and it's just opened my eyes. I'm thinking of two analogies. One is probably the easiest analogy is that the body is a high performance computer. Imagine any glitch in the electricity coming in, anything that's wrong with one of the components, it causes it to slow down, bogged down, maybe a little energy spikes. And the body is reacting to that all day long. A well made computer can work its way through it. It'll still operate, but it might be affected from that point on. I also look at it at the body being a high-performance automobile. From a more of an analog standpoint, you put in gas that's not the right octane. Maybe you're a little bit too hard on it one day. You gotta look at it at these ways and a lot of my clients, it'll help them to sort of visualize things in a way that they understand. All of these analogies, it all comes down to making sure that the system is operating properly based upon the the surrounding environment, what you put into it and how you take care of it.

Brandon: Absolutely. To that point of your computer analogy, and I don't get into this level as to sophistication with my patients, but I identified several mechanisms of how electromagnetic fields can be influencing the human body. And the one that I think is the most compelling is the work of Dr. Martin Paul. He wrote a series of papers showing that EMF exposure very clearly increases tissue calcium levels. And then the membrane of our cells, we have these structures that are called voltage gated calcium channels. So the voltage, literally, there is a small amount

of electrical force that is responsible for how calcium is flowing in and out of the cell. And so what Dr. Martin Paul was able to very clearly show is in the presence of EMF fields, there is a derangement in these voltage gated calcium channels. It causes an increase of tissue calcium and from that derives free radical damage. Free radical damage is really, that is the key to cancer in general. Wherever you see free radical damage, you have the potential for DNA damage. You have the potential for cancer formation. So very clearly, we are seeing this connection now on a cellular level of how electromagnetic fields are affecting basic human mammalian physiology.

Andy: Wow. Fascinating.

Jay: Andy, remember when we did our Feng Shui interview and of course, the model of Feng Shui we're working with energy working with chi. I'm interested, Brandon, in your thoughts about the connectivity between the ideas of Feng Shui for the home and how EMF might have an impact on, and this maybe this is so esoteric, there's not much that we can talk about, but it just dawned on me that I was trying to make that connection between Feng Shui and the actual force itself. So what's your thoughts on that?

Brandon: I can say a few words about that. You know, obviously Feng Shui is kind of one of these sister disciplines to traditional Chinese medicine in a sense that we're looking at the health of the environment. I've studied it a touch. I'm not certainly an expert in it, but some things are very obvious. For example, in functionally we want to avoid furniture and such, the sharp corners because of how energy flows around it. Well, to me that's a very practical thing. If you just fall and hit your head on that sharp corner, it's going to air as opposed to having a rounded corner where things are smooth, especially if you have a little tykes running around your house. The Chinese are very... it's interesting culturally and having traveled and worked in China, they do still kind of talk about chi, they talk about the energy of an environment or the energy of a food or the energy of a person. The way that we think about vibes or how something feels to us. In their world, that's just the reality. For us it seems like EMF, even though we can't perceive it per se certainly is having effect. It's having an effect on our environment. One of the things that I find most interesting is when someone does shut off their wireless router at night, how much better they sleep or when they're not tuned into their devices all the time and they're getting stressed out from social media and how much more

calmer they are. So to me it's like this isn't rocket science. There's certainly ways that we interact with technology that change our relationship to our environment. Anyone who is versed in functional way would probably mirror that same sentiment.

Jay: That makes sense. Makes sense.

Andy: So, Brandon, what's the future for you? Are you working on anything new that we can talk about?

Brandon: I'm working on the second book right now. It's tentatively titled Cancer Stress and Mindset. And I plan on writing a series of books, hopefully one published every year that really dives into different subtopics in cancer. I think in several of them probably will deal with some form of environmental issue. Again, this book that I've written is, it's primarily... And all of the things my blog included are written more for the cancer community. However, if there was a second so to speak community that would be interested in this kind of work. It's people that are tied into environmental work but maybe aren't as fluent in electromagnetic field stuff.

And so I wanted this to be as much of a working book. The afterword of the book actually was written by an EMF specialist who's been doing it for 20 plus years and giving his recommendations to what kind of meters to buy, how to walk around your house or your office and start looking at this. I want it to be really practical. I want all my work to be practical that way. I want it. Basically, again, if you were someone who was wanting to prevent cancer or let's say someone was diagnosed in your family and you just wanted to pick up one resource to kind of cut to the chase on what you can do to start making changes and do it in an afternoon, then this is the kind of resource I wanted to provide for people.

Andy: Fantastic. Brandon, it's been an absolute pleasure to have you on the show today. We look forward to having you on the show again when your next book comes out, if you'd be so kind to come back on.

Brandon: Wonderful. Yeah. Thank you Andy and Jay.

Jay: Thank you for the education I appreciate that. I'm going to be getting your book and reading through it, so thank you very much.

Andy: Wow. Just fascinating, fascinating stuff from Brandon. We just can't thank him enough for being on the show and it's really nice because he's from our backyard too. He's right from Southeastern Wisconsin. He's also a client of mine. And so I get to speak with them quite often these days. He's going through a home that home remodeling he talked about. But in any event folks, I hope you enjoyed that episode. We really, really enjoyed having him on and we hope to have him on as soon as that new book comes out.

Folks, please let your friends and family know, especially about this episode. It's an important one. I believe there's a lot of good information here that folks need to know. So please send this along to your friends and family. Please reach out to 'em, go to iTunes and give us a five star rating and review. We'd greatly appreciate that. And with that, we'll see you next week.