



1027: Earthing and Grounding: Native vs Non-Native
EMFs and Why Your Body Loves the Earth
(Solo Episode)

Child: Welcome to my mommy's podcast!

Katie: This episode is brought to you by BIOptimizers, and I love this company. And specifically today I wanna talk about one of the favorite things that they make, which is called Masszymes. So let's be real. We all kind of start this part of the year saying, we're going to eat cleaner, train harder, feel lighter.

But it's not just what we eat and what we do, it's what we absorb. And if our digestion is sluggish, the body just can't keep up. And this is why I love Masszymes all year, but especially this time of year because it's a simple digestive ritual that's made a huge difference for me. It's loaded with 18 enzymes, including four times more protease than top competitors, to help us break down dietary protein, carbs, and fats efficiently.

And I've shared before, I've done a whole episode on enzymes and how this was really, really impactful for me personally. But this means that we get better nutrient absorption, less bloating, and more real energy from the food we're already eating. I'm also a big fan of nutrient loading and really maximizing that in our food too.

And enzymes help us get the maximal benefit from this. It's this hardworking, yet smooth enzyme blend, and it's been a favorite of mine for years, and a customer favorite for over 20 years. It's a ritual that your stomach will thank you for anecdotally. I feel like I really don't get sick now that I have made these a regular part of my routine.

A lot of people find they don't have post-meal food hangovers or bloat after taking these, just clean energy to crush goals all year long. For a limited time, you can save up to 26% off their products and bundles during the New Year New You Sale by using my code `wellnessmama15` at checkout.

And select bundles are on sale for up to 45% off, so you can get a massive discount there. Visit bioptimizers.com/wellnessmama and use the code `wellnessmama15` at checkout. To get the best deal on Masszymes and all BIOptimizers products. So that's bioptimizers.com/wellnessmama and the code `wellnessmama15`.

So start 2026 with a stronger gut, more energy, and better digestion.

This podcast is brought to you by LMNT, and this is a company you might've heard me talk about before, and I really love their products because proper hydration leads to better sleep. It sharpens focus, it improves energy, and so much more. But hydration is not about just drinking water because being optimally hydrated, a state called euhydration is about optimizing your body's fluid ratios. And this fluid balance depends on many factors, including the intake and excretion of electrolytes, which many people don't get the right

amounts of. Electrolytes are charged minerals that conduct electricity to power your nervous system. I talk a lot about nervous system on this podcast.

They also regulate hydration status by balancing fluids inside and outside of our cells. LMNT was created with a science-backed electrolyte ratio of 100 milligrams of sodium, 200 milligrams of potassium, and 60 milligrams of magnesium with no sugar. Since electrolytes are a key component of hydration, here's what happens when we get our electrolytes dialed in.

We have more steady energy, improved cognitive function, suffer fewer headaches and muscle cramps, we can perform better for longer, and especially the support fasting or low carb diet because when we stop eating carbs like during a fast, the absence of insulin allows the kidneys to release sodium.

So replacing that lost sodium with electrolytes can help you feel good on a fast. Since LMNT is zero sugar, it also doesn't break up fast. Electrolytes are also important for maintaining blood pressure, regulating digestion and proper fluid balance. Keeping skin hydrated, which is a big one that I feel like often gets missed and so much more.

I feel like proper electrolytes is a missing piece for a lot of people and I love LMNT's new canned drinks, which are sparkling water with all the same ratios and minerals I just talked about, and they are delicious. You can check it out and learn more at drinklmnt.com/wellnessmama. And at that link you will receive a free sample pack with any order.

Katie: Hello and welcome to the Wellness Mama Podcast. I'm Katie from wellnessmama.com, and this episode is going to go deep on my understanding of a topic I get a decent amount of questions about, and I feel like that is often misunderstood, or there are at least a lot of products marketed around, that it's important to understand some nuance around before trying, because this is a little bit of a complex topic.

One with potential tremendous benefits, but also some cautions to understand before just adopting certain practices that are floating around social media. So that, like I said, is the topic of earthing and grounding. We're going to talk about native versus non-native EMFs and how our body loves and needs native EMFs, but all of the nuance to understand related to that. There's a lot that goes into this topic before we jump in, this is entirely just my opinion and my understanding of this topic. It is never medical advice or really any advice ever, frankly, for that matter. At the end of the day, we are each our own primary healthcare provider. Please always do your own research, ask questions. Question everything. Even, and especially me, I'm just sharing my personal research, what I have anecdotally tried and what has worked for me, always for inspiration, never for comparison or prescription.

So like I said, question everything and here are some things you can continue to question. So to start off as background for this topic, the idea of what is earthing or grounding, those terms get often used interchangeably but, simply put, everything grounding in its purest form is being in direct contact with Earth's field.

There are many ways to accomplish this. I'll go into some of those later on. There are also devices that claim to accomplish this and shoes that claim to accomplish this. I will go into those as well. I will say from my understanding and the research, I've seen nothing beats the earth itself.

Nothing beats direct contact with it, whether that's bare feet on soil or rock, whether that is even better, bare feet or skin in a natural body of water, like the goal for the ocean or a clean river or stream, but direct contact with the Earth's field. And there's also an element to this that I'll go into later about proximity to the earth. So even if we're not directly touching the earth, being closer to the earth, like first floor of a building, seemingly is different than being on like the 10th floor of a hotel, for instance. So more on that later, but I wanna offer also a reframe around earthing and grounding.

As a physics and kind of biology interface, the earth is, if you think of it as an electron reservoir. So this massive electron reservoir ball and contact with this in the right way kind of equalizes the potential between our bodies and the ground. So there's actually like both a physical and a biological interface that's happening when we come in direct contact with the Earth.

And we can also consider that most animals who live outdoors are in almost constant contact with the earth, and quite likely humans were for a large amount of our history. It's only relatively modern that we spend so much time indoors, so much time in rubber soled shoes, so much time not in contact with the earth, not in direct contact with sunlight and natural air.

And I've talked about a lot of those things separately. So in this one, I wanna especially go deep on the earthing and grounding perspective. Especially because I feel like this is very important now. We statistically spend more time indoors. We wear, like I said, rubber soled shoes, which are relatively new invention in the span of human history.

We can live in high rises that take us many floors above direct contact with the earth. And another important factor that I'll touch on in more detail later in this episode, we are in near constant contact with non-native EMFs, so I know EMFs get all like lump lumped into one category. When we're talking about earthing and grounding, we're talking about exposure to native EMFs.

So electromagnetic fields produced by the earth that are largely vital and beneficial to the body. But many of us are in almost constant contact with non-native EMFs, which are things like, wifi, cell towers, all the other non-native EMFs that we come in contact with through electricity and through our interface with the technological world.

I will also say in some ways, while evidence does exist on this topic, a lot of it is early. However, anecdotal evidence on this is as old as we have recorded human existence and we have a lot of understanding around how humans have existed prior to modern times and some of those shifts that have happened now.

So, like I said, evidence is somewhat limited, but there is. And I wanted to go into a little bit more of a scientific understanding of what grounding or earthing is kind of in plain science, so we're starting from a working basis here. So the electrical basics around earthing or grounding. The Earth's surface is conductive and maintained at a negative potential.

So use a science term you might remember from high school. Direct contact with the earth's surface allows charge transfer that can shift our body's voltage. And I'm gonna talk more about voltage soon. I'm also gonna link to a course about this in the show notes if you wanna take it. It's kind of like a postgraduate course that goes pretty deep on voltage, cell danger response, lots of other things that I have personally found fascinating. I know that's a little bit of an in-depth topic, but the basic part to understand is, strictly at a high level, is that the body has voltage, it's important to understand it. I would say from a triage perspective, voltage matters more than the biochemical, which I'll talk about more in the future as well.

But the earth maintains a negative potential. The body can often build up a positive potential voltage and contact with the earth, with bare skin, can help equalize and reduce that body voltage. When I use the term native EMFs, so these are native and natural EMFs, electromagnetic frequencies that originate from the earth or from sources that our biology recognizes as natural and safe.

So this would be like the Schumann resonances, which are 7.8 hertz or higher in different modes. These natural signals correlate with the atmospheric and geometric activity, so their frequencies overlap EEG bands. A lot of the causal health links have not been well studied yet, but when I'm talking about native EMFs, I'm talking about ones that originate from the earth in some form.

When I say non-native EMFs, I'm referencing manmade electromagnetic fields or frequencies from wiring appliances, networks, radio frequencies from wireless devices. Mainstream bodies do not consider these electromagnetic frequencies a proven cancer

risk. They're definitely controversial. A lot of mainstream sources will say that they are not harmful.

A lot of people will anecdotally say they have experienced negative health effects from them and positive health effects from removing them. Seemingly reduction is still helpful for sensitive individuals. My opinion, it is all about balance and it's that we're getting an extremely high amount of non-native EMF exposure compared to what we ever have throughout history and not enough exposure to earthing, grounding to the Earth's surface and all of its benefits. I don't think that necessarily non-native EMFs are categorically always harmful. I think the dose makes the poison and we're getting proportionately way too much of them. My personal take is that we were meant to be in contact with nature for most of our life, and that a lot of native EMF exposure was part of our existence for almost all of human history.

So we're not as adapted to non-native EMFs. So it's about understanding what's happening electrically in the body and finding balance. On that note, let's talk about what happens physiologically when you are grounded to the Earth's surface. So there's a lot that is studied. Like I said, a lot of this is early and not super well documented.

But in blood studies. So in blood radiology, there are small crossover trials that show increased red blood cells zeta potential and reduced aggregation and viscosity. So less thickness in the blood, which is typically a good thing. This might also support microcirculation. This is early data in a small sample size, but one potential area that they're looking at as to why native EMFs may be beneficial for us.

There's also some limited data looking at things like inflammation and stress, and some really interesting preliminary studies report changes in diurnal cortisol patterns, which anecdotally I have seen when I have gotten more exposure to nature, to natural light, and to earthing, which I have talked about pretty extensively in other episodes. My cortisol shifted from being completely out of natural rhythm where it was too low in the morning, too high at night, back into what we wanna see. Which is a cortisol rise in the morning when we wake up, and then a gradual decline in the evening for bedtime. So this did seem to have an impact for me.

And there's also some preliminary data around HRV or heart rate variability and mood, as well as pain and inflammation. Again, preliminary studies are not large scale, so these are small randomized control trials. Some do exist, they're just very small. There's also some studies around sleep and daytime function.

With some small trials suggesting improved insomnia scores and daytime sleepiness scores when earthing protocols were followed. Larger confirmatory studies are underway

but not completed yet. So there's a mechanistic hypothesis here, which is that electrons from the earth may help neutralize extra reactive oxygen species at sites of excess charge.

And this is, this can be supportive. This is not definitive studies yet. But like I said, there, to me, is very little risk to being in nature, especially if we're doing it in a place that is safe, and a lot of potential benefits. So even as we await randomized controlled trials around more understanding of this I still feel like spending time in nature, especially barefoot, especially in the sunshine, far outweighs the risk.

And so I personally, again, personal opinion, but I personally prioritize this and make it a big part of my routine. I also wanna touch on why high rises and modern living can disrupt this kind of natural body voltage balancing that happens when we come in direct contact with the earth. Because this is something also relatively new in the span of human history.

The idea is that when we are insulated from the earth, like basically the closer the better, with bare feet on bare ground being the closest and the best, but the farther we are, the more insulated we are from the earth's surface, whether it be through upper floors, synthetic flooring or rubber soled shoes.

We maintain a higher AC body voltage in ambient electric fields, whereas direct contact with the ground or a true ground reference drops our body voltage. And this is measurable. And of course I have, am going through right now and find fascinating by Justine, who I have interviewed on this podcast, I'll link to that in the show notes, but she really goes deep on understanding this topic if you really wanna get into the science of it.

Practical translation here though is basically the further and more insulated from the earth that we are, the less natural charge equalization and balance we get. The more we make contact with the earth surface through water, through soil, through bare skin touching the earth in some form, the more natural charge equalization we get.

And like I said, my theory is this is actually about the balance, not about an extreme in either direction. And just to reiterate, there's the native versus non-native EMFs, so you don't necessarily want to get direct contact with non-native EMFs, though most of us actually are doing that kind of all day every day.

But the native fields would be solar, geomagnetic, and schumann. These are part of the planet's natural environment. Lab work explores interactions with circadian biology and cryptochrome magno sensitivity, but human health effects remain an active research area here. There's also the non-native fields, which are wiring devices, wifi, cell phones, kind of anything that's manmade that we interact with on a daily basis. And some sensible steps here, just, I don't think it has to be complete and extreme, but just increase our distance to these things, not sleep with cell phones by our head. In my house, cell phones have a

charging drawer in the kitchen and they live there. I take the wifi down at night since we're not using it anyway, some simple changes like that. Reduce the duration. There is some evidence that just removing wifi exposure, for instance, while sleeping, can be beneficial. And like I said, hopefully none of us are using the wifi while we're sleeping. And when possible wired devices over wireless, and I am not as strict about this as a lot of people are, especially people who are EMF sensitive.

However, I do think some of these small steps that don't require any extra effort once we set them up are worth doing. And even as we await more research, there's really very little downside to trying them, especially during sleep because we are in a more sensitive state while we're sleeping. So I turn off my wifi at night.

I put my devices in airplane mode. I do have an EMF canopy on my bed, which I can link to. I don't have a kill switch in my room or my house. I know many people who do. I've considered it. I don't currently have this, but I do take other steps, like turning off the wifi. And I also wanna talk about how I personally get enough interaction with the earth and how I navigate earthing and grounding.

One you've likely heard me talk about before is morning sunlight. And when possible I try to do this barefoot in my yard or on sand. Just getting that early morning direct exposure to both light to the earth for me often while drinking some form of mineral water is an amazing start to the day. I feel the difference when I do it.

Absent of any studies, I would continue to do this just based on how I feel. I also like to garden when possible. That's direct exposure with the earth, with soil. I've written before about why gardeners often live longer and the many benefits of interacting with the earth, both from a grounding perspective, fresh air perspective, vitamin D perspective, microbiome perspective.

Also love outdoor walks and beach walks, outdoor meals. There's some fascinating evidence around eating in natural light. So seated on stone or grass or outside my backyard. There are also a lot of leather soled shoe companies, so at times we do have to wear shoes we can now find grounding shoes and there are some that legitimately work.

I also just prefer to be barefoot as much as possible. Which thankfully I live in a place where that's pretty easy to do. One time I find grounding especially impactful and feel a difference from is after being on a flight, especially a long flight or an international flight. I will often take off my shoes and get my bare feet on ground somewhere, hopefully also in sunshine as soon as possible after landing, and this seems to help a lot with that post-flight fatigue. So I think that one thing we can do here is stack this with natural light to kind

of double the benefits. That's why I often do this during morning sunshine or while out for sunset in a beach walk or whatever it may be.

I think the more natural light and the more grounding interface, the better, for the most part. Even, there are studies like the camping study that look at complete removal of artificial light. Being entirely outdoors for a span of even a few days, and the massive shifts that we're seeing in sleep quality and even lab results.

So I've hopefully established that exposure to native EMFs can be really beneficial and why a person might wanna consider practices like earthing and grounding. You've perhaps encountered, there's a whole host of devices and products marketed for doing this in kind of mimicking nature ways versus just getting our bare feet on the ground.

And I wanna touch on these a little bit because with some really important caveats, there might be a time and a place for these. However, I find that there's a lot of misunderstanding around these, and sometimes these things actually might be doing more harm than good, so you might be using them thinking you're getting exposure to native EMFs and you're actually intensifying your exposure to non-native EMFs.

So I'll explain by, what I mean by that. A lot of these products are outlet connected grounding sheets or mats, so they're plugging into the grounding part of an outlet, the little bottom part of an outlet, and that's how they are claiming to accomplish grounding. The problem here is they're tying into the grounding of the electrical wiring of your home. So they're also still getting a little bit of those non-native EMFs through the nature of being connected to the grid. So this would only be effective if you have actually verified that your home's grounding is completely correct. Tested that voltage and made sure you're not getting exposure to non-native EMFs as well.

And this depends on your wiring in your house being entirely correct and not just grounded like from an electrical perspective, but actually from a voltage perspective when measured. And I will say I am yet to live in a house where this has been the case. It's something you can check, but you can use an outlet tester and ideally a body voltage meter to confirm a drop when connected to this, if you wanna try this for your home. It's actually why I stopped using Earthing and grounding sheets, was realizing I was actually still getting exposure to non-native EMFs through attempting to use these products.

One workaround here, some practitioners recommend a dedicated grounding rod that's at least 20 feet from the home's electrical ground to avoid parallel current paths and using instead of grounding to the electrical outlet, grounding outdoors, to the ground. Which I do feel is probably a better plan as long as you don't have kind of ground voltage wherever you are like kind of dirty electricity in the ground around your house, which some people do.

Either way you'd wanna consult a qualified electrician or building biologist who understands body voltage on getting this kind of dialed in, and I personally would not any more plug into an electrical outlet and would just use the ground if I were going to use these products. My personal take is I try to just ground in the morning and in the evening and avoid non-native EMFs at night versus using products because I feel like earthing and grounding mats can potentially do more harm than good.

There are some dirty electricity concerns here as well. If you're not familiar this term refers to high frequency voltage transients on wiring, which is common in many houses, and the health claims here are debated. Some people seem to be very sensitive to these, others not at all. And evidence is mixed or limited. I would say for me, what I've done is focus on fixing wiring errors and reducing easy to remove sources like nighttime wifi before considering filters or really pricey wiring shielding. Like I said, grounding rods to soil can work if they're properly installed, if they're properly separated from the house electrical system, and they are in the ground in a way that avoids circulating currents in the ground. Local codes and soil conditions matter when it comes to this.

So if you wanna try this for yourself at home, you can use a voltage meter to see if there's a body voltage drop when touching a grounded surface compared to not. If voltage rises or is erratic, I would troubleshoot instead of just using those products. Obviously also some brief safety notes around this, grounding requires being in direct contact with the earth.

This would not be a good thing to do during a thunderstorm or when there is a risk of contact with any kind of electrical energized equipment or downed power lines. People who have any kind of implanted electric devices or bleeding disorders, or are using any kind of equipment connected to power, anything that's affecting your body's electricity, definitely check with an expert and clinician related to that specific case before doing any of these things, always. Faulty wiring can place voltage on a ground conductor in your house, so verify that first, if you're gonna use plugging grounding products. And in my mind, nothing beats the exposure to the actual earth.

If you want a practical starter plan to experiment with this, if it's not already part of your routine, I would start really, really simple with things like getting outdoors, aiming for 20 to 30 minutes of direct skin contact with natural surfaces daily. Water, wet grass, sand, mineral soil are the most conductive.

For me, like I said, this is barefoot sunrise with dew on the ground or a barefoot walk. And I do this even in the winter, but I don't live in an area that gets super, super cold. We got snow for a couple days last year, and it was the first time in 30 years. So I realize this is not gonna be true for everyone, but I just will get barefoot exposure even in the winter.

I also love to stack habits around this. So sunrise, light exposure, midday movement on grass or sand or laying in the sun in the grass and the sand. Always post-flight grounding and evening wind down outside when possible, or beach walk with feet in the water is highly, highly effective.

I do notice an HRV difference if I am walking or swimming in the gulf in the evening. If you are really set on using grounding indoors, if using a mat or sheet, test your house's grounding outlet first, confirm that you have a sustained body voltage drop if you're gonna use that. If not, pause and fix your EMF and wiring issues or ground to the outside and check there as well.

I also wanna just briefly reference some places you can go deeper on this. And I'll link to these in the show notes as well. Justine Stenger and other circadian mitochondrial practitioners talk about this in depth. They emphasize light water and grounding as foundational signals for cellular energy and redox balance, and explain this in a much more detailed way than I can cover in a podcast episode. I feel like very useful framing alongside the scientific data we're seeing emerge on this. I do love her course. It's linked in the show notes for understanding the electrical aspects of the body in a deeper way, if that's of interest to you. I will also say from an evidence perspective, most studies are small.

Some are industry affiliated and the results are promising, though limited for sleep, pain, HRV, blood radiology and, but we need larger studies on this to really verify, if you want the scientific backing around this. I would just encourage self experimentation with safe low cost options like going barefoot outside in your yard in a safe area.

And would for the most part, and have myself skipped the pricey devices and everything for now, and just prioritize getting natural light and touching the bare earth. A recap and some key takeaways that actually keep this episode pretty short. Grounding basics. The earth is a massive electron reservoir.

Skin contact, equalizes your body's electron potential and lowers your body voltage in a beneficial way. So that is an easy, free thing that hopefully all of us have access to in some form. When we understand native versus non-native EMFs, meaning native like Schumann resonance, geomagnetic background, et cetera, and non-native being wiring and wireless sources, kind of man created EMFs.

We want to increase our exposure to native signals, essentially nature time, and reduce our unnecessary non-native exposure, especially during sleep. And I don't personally think this has to be a hundred percent or all or nothing. I think it's about the balance. The physiological effects that were discussed in studies, improved blood markers, less red

blood cell clumping, shifts in cortisol rhythm and HRV, reduction in pain and sleep disturbances in small trials.

Like I said, these, the research is small and limited, but promising, and hopefully we'll see more research in the future. When you understand grounding and earthing, it makes sense why modern life makes this difficult and can disrupt it. Between synthetic shoes, synthetic floors, high-rise living, things that insulate us from contact with the earth and keep our body voltage higher.

I personally know people who have probably not touched the ground with their bare feet in decades, including someone in my extended family who even wears rubber soled flip flops in the showers. We're meant to be barefoot a lot, especially outside in my personal opinion. So some best outdoor practices that I follow.

Barefoot sunrise on grass, sand, or soil. Beach walks, gardening, sitting on the stone, on stone, earth, rock of some sort or leather sold shoes as a compromise when we do have to wear shoes. Most natural surfaces conduct best, so sand, dirt, water, et cetera. When it comes to indoor options, some cautions. Use only grounding mat and sheets if the outlet is verified and body voltage actually drops, avoid products that simply plug into questionable home wiring and consider a dedicated outdoor ground only if you've done proper installation and testing. There is a dirty electricity concern here with transient, high frequency transients, on wiring or soil that can ride through the ground.

So test and remediate electrical issues before relying on any kind of indoor grounding, whether through outlet or outdoor grounding rod. From the safety perspective, never ground during thunderstorms or near energized equipment, et cetera. And start with just 20 to 30 minutes of outdoor contact a day. Stack with circadian lighting, morning sun, ideally movement on natural surfaces, et cetera.

To recap, I consider this a very low risk, nature-based habit that pairs well with natural light exposure, movement, hydration and mineral balance. I think this is a very low risk, simple, free thing that we can make use of, that can have benefit to the body. Scientific evidence is still emerging, anecdotal evidence abounds from people who have tried this.

So I would caution around devices and things that claim to do this indoors and encourage the free, accessible, just simply interacting with the earth by gardening, by standing outside barefoot, by walking at the beach, by walking on grass. Wherever you have, are accessible to this. Gardening, I would consider starting there and I do think it can be very impactful.

And I would love to hear your take on this. Like I said, this is entirely my opinion. I would love to hear yours always. I do read every comment, rating, and review related to the podcast and always welcome your feedback. If you could take a moment to leave an

honest rating and review wherever you listen to podcasts, that is a tremendous help as it helps others find and listen as well.

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I'm very grateful if you take a moment to leave a rating or review. But for today, thank you so much for sharing your time with me and for listening. I am always deeply honored and grateful that you do, and I hope that you will join me again on the next episode of Wellness Mama Podcast.