



1053: Minerals Part 2: The Real Story on  
Magnesium: Electricity, Relaxation, and Repair  
(Solo Episode)

Child: Welcome to my mommy's podcast!

Katie: This episode is brought to you by Hiya Health. Everyone's talking about their New Year's resolutions, and while everyone else is promising to hit the gym in 2026, I am focusing on something much easier that'll actually stick (gym's already pretty well a habit for me) which is better nutrition for my younger kids.

And that is exactly why Hiya exists, to give parents a real solution in a market flooded with products that prioritize candy-like appeal over actual nutrition. Some children's vitamins on the market have up to seven grams of sugar per serving and are stuffed with additives and petroleum based dyes.

Hiya took the opposite approach. Zero sugar, zero gummy junk, just clean nutrition. And the crazy thing is kids actually love them. The taste, the experience, all of it. It's thoughtfully designed. They looked at what modern kids are eating and not eating, and formulated around those specific nutritional gaps.

Working alongside pediatricians and nutrition scientists, Hiya created a superpowered chewable vitamin that packs 12 organic fruits and vegetables, plus 15 essential vitamins and minerals, including B12, C, zinc, folate, and more. The ingredient list is clean with no GMOs. It's dairy free, allergy free, gelatin free, nut free.

They've thought of everything. Plus, they've earned their clean label projects, highest purity award certification, and they put every batch of product through third party testing for heavy metals and contaminants. So it's the kind of transparency that actually means something. They are designed for kids 2 and up, shipped straight to your door in a reusable bottle with refills that come every month.

We have worked out a special deal with Hiya for their bestselling children's vitamin. Receive 50% off your first order. To claim this deal go to [hiyahealth.com/wellnessmama](https://hiyahealth.com/wellnessmama) This deal is not available on their regular website. So again, go to [hiyahealth.com/wellnessmama](https://hiyahealth.com/wellnessmama) and get your kids the full body nourishment they need.

This podcast is brought to you by BiOptimizers. Do you ever feel like no matter what you try, you just can't get a genuinely good night's sleep? The real problem might be the hormone changes that come as we age. I learned that our body burns through magnesium faster than we can replace it, and magnesium is what our nervous system actually needs to wind down for sleep. And that's why I'm a huge fan of Magnesium Breakthrough.

From BiOptimizers as part of my routine, I find I fall asleep faster and I'm not just laying there with my brain running and I wake up feeling really rested. But what I love most is it's

not just one form of magnesium, it's a blend of seven important forms because magnesium touches everything in our body

Sleep, yes, but also stress, energy, even digestion, and so much more. Everyone who's tried this talks about the same things, better sleep, feeling calmer, having energy, and I want you to join me in trying it together. So here's my challenge to you. Try it. Track your sleep. Pay attention to how you feel, and see if you wake up more refreshed. You have nothing to lose and a lot to gain because BIOptimizer offers a 365 day, no questions asked, money back guarantee, for a free full year with zero risk.

So here's what you do. Go to [bioptimizers.com/wellnessmama](https://bioptimizers.com/wellnessmama) and use the code WELLNESSMAMA to save 15% on your whole order. And get a free bottle of MassZymes, their bestselling digestive enzyme that I also use daily when you use that code.

So that's a \$20 product free on top of your discount. This is a discount you can't get on Amazon and only while supplies last. So again, [bioptimizers.com/wellnessmama](https://bioptimizers.com/wellnessmama) and make sure to use the code WELLNESSMAMA

Katie: Hello and welcome to the Wellness Mama Podcast. I'm Katie from [wellnessmama.com](https://wellnessmama.com), and as always, I'm so grateful that you are here and that you have chosen to spend time with me. I don't take that lightly. In this episode, which is part two of the Mineral Mastery Series. I'm going to talk about one of my favorite minerals that I have been writing about on my blog for at least 15 years, which is magnesium.

And we're gonna talk about this in context of electricity, relaxation, and repair. I think this is one of the master minerals in the body. If you missed it, this is part two of this series. Part one was about sodium, and I'll link to that in the show notes as well. I think sodium has been largely misunderstood and I've personally felt a big difference from changing my relationship with salt and with sodium.

So that episode will be linked if you missed it. And in this one, I'm so excited to talk about something I've also felt tremendous benefit from by really optimizing my life, which is magnesium. Before we jump in, as always, I reiterate, nothing I share is ever medical advice or honestly, any type of advice for that matter.

I am simply sharing my own experience. The things I've learned and ideas that have been helpful to me on my own journey, I do not think that that blueprint will work exactly the same for anyone else. And my goal is only to offer inspiration and information, never prescription or pressure or comparison.

You are and always will be your own primary healthcare provider and I encourage you to be curious, do your own research and question everything, including and especially me. My

hope in these episodes is simply to help you connect with your own deep wisdom in your body, and it serve as a starting point for your own research.

With that said, let's jump into magnesium. So magnesium is a mineral I talk about a lot because it's one I feel like we know statistically many of us are running low on. This is one of the few things I have been very aware of and trying to get enough from diet and often supplements for many, many years.

In fact, it's one of the few that is actually in my podcast room on my desk. So I remember to take it midday because they do better than at night, which I'll talk about later. But this is probably what I take the most consistently after salt and sodium, which I talked about in the last episode. And I notice the biggest difference from personally.

I'll also say I have, my relationship with magnesium has changed throughout my healing journey. And when I was still in an inflamed state and didn't know it, experiencing things that I was told were autoimmune disease, which I have since reversed. I had trouble digesting magnesium. It often made me itchy.

And when I was highly inflamed and very deficient I had to be a lot more careful with how I consume it. I had to work up slowly. And I had to address things like cell danger response and mast cell activation, and a lot of other things as well. I'm also an inverse modulator. Most people are not.

Most people take magnesium at night and sleep better. I am odd in this regard and have to take it in the morning or I don't sleep at all, so I'm different there. But, for most people, if you're listening to this, probably the advice you will get from your own healthcare provider is to take it at night, and this is probably good advice.

Only a small percentage of people inverse modulate. However, if you've ever followed the advice to take magnesium at night and had terrible sleep, it might be worth looking into. So today I am gonna go into why magnesium is so foundational. Why deficiency is so common. I'm gonna talk about the electrical ATP mitochondria connection, which I find fascinating.

We will go into how magnesium interacts with sodium, potassium, and calcium, the different forms of magnesium and what each actually does, which ones I take and why, and my thoughts on topical or transdermal magnesium, and most importantly kind of all of this under the umbrella of why magnesium when understood correctly and taken correctly is a massive safety signal for the body.

So to jump in, what does magnesium actually do in the body? Here's the big picture. I've said this before, but magnesium's involved in, as far as we know now, 6-800 or possibly

more enzymatic reactions within the body. So we use it for a lot of things. Basically simplified, but if our body wants to do something like make hormones, detox, relax, digest, repair, magnesium is likely involved somewhere.

We know it's involved in the ATP electricity nervous system aspect of the body functioning. So ATP or adenosine triphosphate is the energy currency of the body. It isn't biologically active unless it's bound to magnesium, which is very interesting to consider.

This means ATP equals magnesium ATP. No magnesium means ATP can't be used. This is where we see things like fatigue, poor recovery, and often brain fog. Magnesium essentially stabilizes the electrical charge across cell membranes, which going back to the electrical foundation we talked about in episode one of this series magnesium is another part, another note in this cord that's really important, it balances calcium.

So nerves and muscles don't stay in a contracted or on mode, and it's like a, in a very good way, brake pedal for the nervous system. So it is directly involved in the relax and repair pathway. There's also the element of stress and our magnesium burn rate. So when we are more stressed, we burn through more magnesium.

This is the body doing this to protect us, but high cortisol and adrenaline increase our usage and excretion of magnesium. So if we've been in a high stress state, which, hello, I was this for many, many years, we have a higher magnesium demand because our body is burning through it more quickly.

Basically, the more stressed we are the more magnesium we lose and the more anxious, tight and wired, but tired we become. There's also, it's worth mentioning why women often feel the effects of magnesium deficiency more, which is that our hormones fluctuate more monthly. Magnesium drops at different times of the cycle or shifts, especially before menstruation.

We know that pregnancy increases our magnesium demand and depletes magnesium quite dramatically. We know that breastfeeding increases our mineral needs and that perimenopause and menopause and the stress load also increase demand for magnesium. So women just get to navigate more things that increase our need for magnesium, and that's why we often feel the effects more acutely as well.

As I said, magnesium is a safety mineral and this is why it's one I'm very consistent with because magnesium helps the nervous system relax. It also helps smooth muscle tissues relax. It's why often people will notice a difference in cramping if they get enough magnesium. Basically, adequate magnesium tells the body it's safe to calm down.

You're not in danger, and you can turn your repair pathways back on again. Magnesium is connected to hundreds of those enzymatic reactions. But here's why almost everyone is deficient, even though this is such an important mineral. Most people are deficient in today's world statistically. I've seen varied statistics on this, but upwards of 90% for sure of people are said to be magnesium deficient.

This comes down to a multitude of factors, one being soil depletion. So modern soil contains far less magnesium than it did even a hundred years ago, and even organic produce has drastically lower mineral density now than it did then. We also are now often consuming more filtered water, which has a lot of benefits, however, certain filtration removes minerals unless we remineralize it. So many of us need to be adding minerals back in or getting them from dietary or often supplemental sources. Even people like Chris Kresser have explained that it is now very, very difficult to get our adequate minerals from food alone because of this depleted soil and that it's just not available in the food supply like it used to be.

We also know that stress depletes magnesium faster than we can replace it. So if you've ever been stressed, which, and amazing on you if you haven't, but if you've ever been stressed, your magnesium is being depleted more rapidly. Chronic stress often means chronic depletion. And many of us need more magnesium than we can get from food and that we are getting, even if we're supplementing.

So this is one I have experimented quite a bit over time with really increasing my consumption and notice positive difference. And I'll share more later about what I take and how much I take. There's also the factor of calcium intake without adequate magnesium. Because many diets, if we eat processed foods, there's often calcium added.

Many diets and supplements push calcium and talk about things like bones without balancing magnesium. And I think this is a disservice because we actually need both, but we need them in a very specific ratio. And I'll talk more about this in future episodes but we have sodium potassium pumps. We also have calcium gated channels.

We have lots of things in the body that depend on minerals, and when they're out of balance in any direction, it's problematic. But many of us, just by nature of calcium being added to a lot of foods, are getting plenty of calcium and not enough magnesium. There are also a lot of medications and lifestyle factors that actively deplete magnesium that people don't realize.

These are things like birth control pills, PPIs, some blood pressure medications. Excess caffeine consumption or really any caffeine consumption. And since I'm not willing to

forgo, entirely, caffeine, I make sure I replenish magnesium. Also alcohol, which I personally don't consume anymore at all.

But if people consume alcohol, that's often indication we need extra magnesium as well, or too much sweating without replenishing minerals. As I talked about in the first episode of this series. Symptoms of low magnesium can look like a lot of things and be very varied. However, because it's so involved in so many things throughout the body, it tends to cause a whole host of symptoms.

If we're low, these can be things like anxiety, insomnia, PMS symptoms, constipation, muscle cramps, heart palpitations, migraines, irritability, period pain, tight shoulders and neck, restless legs and more. And those are actually just the big ones. There's a lot of lower level symptoms beyond that. So the way I look at it, essentially, modern or magnesium deficiency looks like modern life, like most people are gonna resonate with, at least some of those symptoms and some of those lifestyle factors that deplete magnesium.

It is also worth delving into how magnesium interacts with other minerals. So I mentioned briefly calcium and magnesium, and I wanna go deeper here. Simplified version, calcium contracts, muscles, magnesium, relaxes them. We need to do both of those things on a daily basis, and we need both of those minerals on a daily basis.

Calcium excites nerves, magnesium calms them. Again, we need to do both of those things on a daily basis. We need both of those minerals on a daily basis. Too much calcium without magnesium can be correlated with things like tension, irritability, and cramps. And like I said, most of us are getting plenty of calcium from our diet and not enough magnesium from diet.

Then there's the relationship between magnesium and potassium, which will be the next mineral I talk about in this series. Magnesium is required to move potassium into cells. We need potassium into cells for a lot of the electrical components I talked about last time. But low magnesium means potassium can't get in the cell.

So even if we're getting enough potassium, it's not working. And then we can see things like heart palpitations, arrhythmias, muscle issues, cramping as well here. I feel like this is a very, actually, like tightly regulated pathway in the body. We have sodium, potassium pumps. In my mind we need the right amount, not too much or too little of sodium, potassium, and magnesium to thrive.

And statistically, many of us are not getting enough actually, of those critical three. Magnesium and sodium. So sodium was the first one I covered. You can go back and listen to that episode if you missed it. Sodium helps with a lot of things. It's also a safety mineral.

It helps with fluid balance and stress response, and I've had experts on this podcast that argue many of us are not getting enough.

Sometimes by a drastic amount. Magnesium helps with calming and relaxation. When sodium is high, which can be needed sometimes, but magnesium is low, you can get that wired but tired feeling. So this is a both and. Just correcting sodium alone doesn't fix the problem unless we're also getting these other minerals in balance as well.

So the takeaway here is we can't fix our electrolytes without any of the big three, including magnesium. Sodium is the charge, potassium is the use for inside cell balance, and magnesium is the conductor and stabilizer, and we need them all in order for things to flow correctly. Now this part gets a little bit more nuanced, but I get a lot of questions about this, so I wanted to get a little nerdy for a second and give a quick overview of the different types of magnesium and what they do.

Because often people hear they need more magnesium, they take one that's an isolated form, but if they don't get the form right they might have a less than ideal reaction to the magnesium or not resolve what they were hoping to resolve and then decide magnesium was not the answer. So I think at least having a passing understanding of the different types and what they do is important.

And I personally take one that's broad spectrum, that has a lot of these types, and I have done the best on that one. I'll talk more about that later. But high level, very brief overview. Here are some of the forms. There is magnesium citrate or citrate. This one is more, you are gonna notice more digestive difference.

So this is good for constipation. It can be too loosening of the stools for some people if you already have pretty loose stools. It's also not considered calming, so it's not great before bed. So if you've ever taken magnesium in the afternoon or evening and not had a great reaction, if you're not an inverse modulator, it could just be that you got the wrong form.

There's also magnesium glycinate or bisglycinate, which is bound to glycine. Something else I might do a podcast on eventually kind of in this forgotten mineral or forgotten nutrient series. This one because of the glycine, is really good for sleep and relaxation and is very gentle on digestion.

I really like this form. I also am a big fan of glycine and if you have sleep issues and haven't experimented with a combination of magnesium glycine and acetol that was a magic help for me. I do take it in the morning. Most people take it at night. More on that soon too. But I do love the magnesium glycinate form.

There's also magnesium malate, which is where magnesium is bound to malic acid from fruit. This one is often helpful for ATP and mitochondria. And people use this one for fatigue and muscle pain. There's also magnesium L-threonate. This one is cool because it can cross the blood brain barrier, so it's good for cognitive support, mood and memory.

It typically is more expensive, but people often notice a really positive effect from this one. There's magnesium taurate, which as the name suggests it's bound to taurine. This one can be especially beneficial for heart rhythm and blood pressure, and is considered very calming. There is a magnesium orotate, which is good for mitochondrial energy and sometimes used in heart health context.

Obviously work with a practitioner, if that's you. There's magnesium chloride, which is pretty highly absorbable, and this one is often used topically or transdermally. So if you've ever used a magnesium spray or oil or bath, this is likely the form you're getting. I am a fan of this one transdermally.

And then magnesium sulfate. This would be a form you might've commonly heard called Epsom salt, which is, I love in detox baths. It's not as great in the supplement because it can be too laxative. However, more obscure use case, but I have used this before personally in liver gallbladder flushes because of its laxative properties.

But if you're trying to get your magnesium levels up, this is probably not the form to choose. So that's some of the most common forms of magnesium that you would encounter and the kind of similarities and differences between what they do. I personally take one, I mentioned it literally lives on my desk called Magnesium Breakthrough, and I like this one because it has seven, the seven more optimal forms that I just mentioned that target different tissues and different mechanisms.

So I find this one like more broadly beneficial. What I personally noticed was better sleep, better stress, resilience, not getting muscle cramps anymore. Better digestion and better nervous system metrics on my Oura ring. I feel like it's a very comprehensive way to fill the gaps without guessing, and it's the one that I've noticed personally the best response to.

I'll link to it in the show notes, but there's a lot of good broad spectrum forms out there now. I also wanna talk about topical magnesium. Because in a way, this is a little bit of its own category. What's cool about this is it absorbs through the skin. So it can work for people who are digestively sensitive or have digestive issues where they're not absorbing things adequately.

So, or if someone has loose stools or gut issues and isn't absorbing supplements, it's a way to kind of bypass that. I also love this for localized fatigue or pain or muscle cramps, and it

can raise magnesium levels measurably in some people, especially in magnesium chloride form. So I like using this one on my legs and feet especially, often post-workout.

There are forms of topical magnesium, including magnesium oil, lotions, butters, Epsom salt baths, or magnesium chloride baths. And I can link to both DIYs and different places to source those. If you're interested, those will be in the show notes. Many people love those in the evening before bed for relaxation or after sauna, or exercise on tight muscles or sore legs or a lot of people use 'em for restless legs on their calves.

Now I wanna talk about, like I said, food sources of magnesium are often depleted in the modern world, but I don't wanna not mention food sources of magnesium. I think this is always a both and. Even if we can't fully source things from diet, it's not, we're ignoring the dietary component either.

So, where we can get it from diet, where we can't supplement when needed. But food sources of magnesium would be things like pumpkin seeds, almonds, cashews, leafy greens, dark chocolate, which side note might be a reason women often crave chocolate around their cycle, this is a very used stereotype, and the wisdom of the body in that chocolate is often very high in magnesium. Salmon, avocado and black beans. Like I said though, foods rarely provide enough anymore, especially if we're already depleted and the amount of certain foods we'd have to eat to get our magnesium up would actually be pretty calorically restricted.

Or like, we wouldn't just calorically, we wouldn't be really able to do it without consuming way more calories than we need. So I do feel like this is an area that supplementation is really helpful. And I've had many experts echo that, including Chris Kresser, who for many years said, you know, get everything from food.

And now he's even said, we no longer can. So from a supplementation perspective, this is very nuanced. Do your own research. How much we need varies a whole lot based on lifestyle factors. I take 500 milligrams to a gram of magnesium from this form a day. Most recommendations I see are actually between like 2 and 600 milligrams a day.

For people who are adjusting to it. I noticed digestive issues when I first started, so split doses were helpful for me for that and for most people taking it at night is gonna be helpful for sleep. I actually take it first thing when I wake up. But I am definitely an outlier. So for most people, nighttime is more helpful.

I also think it's worth addressing lifestyle factors that are depleting our magnesium, so reducing our unnecessary stress, replenishing our minerals and electrolytes as a whole after sweating, getting enough sodium and potassium for balance here, and improving our gut health so we can actually absorb these supplements in the first place, as well as

reducing the things like chronic stress and the danger signals that are depleting our magnesium.

So back to the larger theme of this episode, magnesium is a safety signal. It tells the parasympathetic nervous system that it's safe to turn on. And this is huge because most of us are living in sympathetic dominance. I did a podcast about fight or flight. Magnesium relaxes our smooth muscles. It can lead to better digestion, better sleep, better hormones.

It can calm the limbic system. It lowers the threshold needed for the body to shift into rest and repair. So the kind of, if I had to sum up this episode, it would be that magnesium is how the body exhales and most of us aren't getting enough, and the body is feeling the stress of that. So when magnesium is present, the whole system softens and I will put some resources in the show notes for more learning related to magnesium, especially if you like to read some resources there as well as links to all the things I've talked about that I personally use and do.

However you get this, however you address it, do your own research. But it's highly likely statistically that we are all deficient. And I've personally noticed a drastic difference in my nervous system and my sleep and a lot of other things by really dialing in my magnesium. So, key takeaways to end this episode.

Magnesium is involved in hundreds of processes, from energy to hormones, to detox, to sleep, to calm, and much more. Almost everyone is deficient because the modern lifestyle, by its nature depletes magnesium because of modern soil stress. The water we're drinking and medication use. Different forms, do different things.

This is why I like to use a blend. And topical magnesium can be a both and a powerful extra tool. Magnesium interacts deeply with sodium, potassium, calcium, and the entire nervous system. And in this, the context of this mineral series, magnesium is the relaxer, potassium is the balancer, sodium is the charger.

And I'll get to the humic and fulvic later. But those are the missing layer. And I'll also, like I said, explain at the end how all of these work in symphony. But next up, stay tuned for potassium, the calming electrical mineral, and the missing kind of fruit and root connection. And if you miss sodium, I'll link to that in the show notes as well.

But for this episode, thank you so much for being here with me. I love the topic of magnesium. I would love to hear if you've benefited from it or how you incorporate it or don't. But thank you so much for sharing your time and your presence with me today. I'm so grateful that you did. If you have a minute, it would mean a lot if you could leave an honest review wherever you listen to podcasts, which helps other moms and families find and listen and join the community as well.

And if you found this episode helpful and you wanna stay in the loop with future episodes, other resources, and behind the scenes updates as well as weekly wellness tips, you can subscribe and join my VIP email list at no cost at [wellnessmama.com](https://wellnessmama.com). And I would love to have you as part of the community. Thank you as always for listening and sharing your time with me today, and I hope you will join me again on the next episode of the Wellness Mama Podcast.