

Episode 189: Migraine Supplements

Lindsay Weitzel: Hello everyone, and welcome to HeadWise, the videocast and podcast of the National Headache Foundation. I'm doctor Lindsay Weitzel. I'm the founder of Migraine Nation, and I have a history of chronic and daily migraine that began at the age of four. I am here today with Doctor Amelia Barrett. Hi, Doctor Barrett, how are you today?

Amelia Barrett: I am fine, thank you. How are you?

Lindsay Weitzel: Good. Thank you so much for being with us. Doctor Barrett is a board-certified neurologist and the founder of the Migraine Relief Code, which is an online course for people with migraine.

today we are going to talk about something that I think everyone would love to hear about. we haven't done this before on HeadWise. We are going to address the various supplements that we hear about that may or may not be beneficial for people like us with migraine to take.

And we're going to discuss, whether or not there's evidence for them. If there is what the recommended doses, whether or not it's safe to take in pregnancy or lactation, etc. and even if we know why the supplement is helpful for us. So, we're going to give a little extra information that isn't always out there when we read stuff online.

And so, this should be helpful to everyone. And Doctor Barrett is really knowledgeable in this area. So, I called her up and I asked her if she would do this for us. And I'm really excited that she's here. So, let's get started with the one that I think is the one that has probably the most evidence behind it.

We're going to start with magnesium. Doctor Barrett, is there evidence that we're taking magnesium, and why is it helpful for us?

Amelia Barrett: Oh, absolutely. If you are going to pick one supplement to take for your migraines, take magnesium. There was a meta-analysis, published in 2018 that looked at over 204 studies.

So, when you. Hear us talk about all the other supplements on. Today's podcast, you'll.

Notice there's that's, you know, there's nowhere near as many studies of all of the other things we do. So, magnesium is one of the most helpful supplements you can take for your migraines.

Lindsay Weitzel: Okay. So, when we say to take it, there's various types of magnesium out there. Correct. Which one should we be looking for to test?

Amelia Barrett: Yeah, really good question. And there sure are so many people see the recommendation to take magnesium citrate. But everybody listen up because magnesium citrate is a laxative. Any of you out there who ever have ever had a colonoscopy that stuff they give you to drink before it? That's mag citrate.

I want to really help dispel, this idea that magnesium citrate is the form we should be taking. What our goal is with magnesium is really to get it into your body. And if it's giving you those severe GI side effects that you know, that make you go, then your body is not absorbing very much of it. And so, we really need to stick with chelating forms of magnesium, because they allow your body to absorb it from the GI tract.

So, my favorite is magnesium glycinate. There are a couple of others people use as well, but when you stick with those, you can take a high enough dose that your body can actually benefit from it. And it really keeps those side effects down to a minimum.

Lindsay Weitzel: Okay. Why does it help in migraine? Do we even know?

Amelia Barrett: Oh, we do. We have some really good information. This is very exciting. So, as you know, magnesium can be used both preventatively on a daily basis and also acutely. And that,

the fact that it works in both circumstances is really reflected by the mechanism of action. So, in a long term,

sense, what magnesium is doing is it's decreasing the excess firing in the brain, which is the result of glutamate.

Okay. Glutamate is what's called an excitatory neurotransmitter. Magnesium blocks that. So that's how it helps cut down on those, you know, migraines happening in the first place. And then once you've got one, there are a couple of cool things that it does. It blocks something called substance P. You can think of P for. Pain kind of just like that.

but it blocks that. And so that's one of the ways that it cuts down on pain acutely. And it also stabilizes your blood vessels. It is one of the only supplements we have that can actually help with an aura. It can cut down on the frequency of an aura. Now, if you take it at the time of an aura, of course it may not kick in quick enough, especially if you're nauseated or vomiting, but preventively.

It can also help stabilize those blood vessels and get rid of auras.

Lindsay Weitzel: Okay, so let's really quick tell everyone the recommended dose if you want to take it daily in a preventive manner.

Amelia Barrett

Yeah. You can take anywhere between 400 to 600mg a day, although we do have people who go higher. But that's probably a good place to start.

Lindsay Weitzel: Okay. And then if you are taking it, you know, some people do get an IV.

especially if their doctor sends them to an infusion center, etc., they'll often go get like 1 to 2g. Is that right? IV if they have an ongoing migraine process, especially if they're in status.

is that how much they get? Is how much do they get?

Amelia Barrett: Yeah, absolutely. And it is harder to get that glycinate by IV. If you're going that IV route, you may not have control over exactly which kind it is, but don't worry about it. It's an IV. It's not going through your GI tract. So, it is all good. And there are probably a dozen different studies showing that IV magnesium,

has the statistically sensitive, statistically significant benefit in terms of relieving migraine acutely. The best of those showed that 87% of people who got a gram of IV in a liter of normal saline, actually, had improvement in their headache. So, not all the studies are that good. That's kind of the best-case scenario.

But definitely, if you're having to go to the emergency room for a migraine cocktail, definitely ask them to add that on.

Lindsay Weitzel: Okay. And since we have so many women listeners who may be wanting to get pregnant or maybe pregnant,

is magnesium one of the things that we can take if we're pregnant or lactating?

Amelia Barrett: Absolutely safe.

Lindsay Weitzel: Okay, great. So, let's move on to B2 or riboflavin. Do we have data that actually shows this can be helpful to us if we have migraine?

Amelia Barrett: Yeah, we really do. Going back as far as 1998 to which is when the first randomized controlled trial was published using really huge doses.

vitamin B2, which is also called riboflavin. So just as an example, the United States recommended daily allowance for riboflavin is less than like two milligrams a day. They had people take 400. So, it kind of it kind of rocked.

The headache community a little bit when they came.

Out with a study using these high doses. And ever since then, we've just kind of stuck with these high doses. And there was, a meta-analysis published in 2022.

they looked at nine different studies, and they did find that the B2 showed a statistically significant reduction in headache frequency and severity. So pretty decent data really that it helps.

Lindsay Weitzel: Okay. Do we need to take those high doses for it to work? Is that the recommended dose.

Amelia Barrett: That is the dose that's recommended by the American Academy of Neurology.

I personally tend to use lower doses in combination. I find that with I put people on a combination of supplements than getting to those high doses of one particular supplement doesn't seem to matter as much.

Lindsay Weitzel: Okay. And is this one of the ones that we can take in pregnancy or if we're breastfeeding?

Amelia Barrett: Sure can. And it's got a unique mechanism of action. It's thought to work in the mitochondria which are the energy producers inside your cells. B2 is one of the, one of the ingredients in this long cascade of biochemical events that gives your cells energy. And as we all know, the brain is kind of an energy hog.

It uses such a huge proportion of our caloric needs in our daily energy. So I think it kind of makes sense that enhancing your mitochondrial function would help with the organ that needs more energy than any other organ.

Lindsay Weitzel: Right. Okay. So, moving on to vitamin D, I feel like we recently like ten years ago or so, we went through a vitamin D phase where it was like the vitamin that everyone was talking about. Does it actually help with migraine? Do we have evidence for that?

Amelia Barrett: Yeah, there's been more conflicting data, but there was a meta-analysis that was published in 2021 of only five studies, but it did show reduced frequency of migraines. So, there is some data that it helps. I think if we look at vitamin D in the global sense of all the other things that it does for the brain, we can certainly make an argument that it's important for brain health as a whole.

Lindsay Weitzel: Okay. And is there a recommended dose for that one, or do we not have enough evidence on that one that they've recommended a dose for migraine?

Amelia Barrett: Yeah. You know, the American Headache Society has not recommended an actual dose or vitamin D even hasn't recommended that actually. But, so we're kind of, you

know, taking this number based on the results of a lot of studies. I would say something in the neighborhood of 2000 IU per day is reasonable, and you can find that in a lot of multivitamins if you look, which makes it very easy to just sort of add that on to what you're doing.

The one thing that is definitely clear is that people who have chronic migraine definitely have lower levels of vitamin D on average. We know that that has numerous effects on the body. So I consider it to be one of those things where even if we don't have great data on migraine specifically, we know that it does so many other good things for the body and it's so easy to take that there's no downside.

Lindsay Weitzel: And we know that you can take that one if you're pregnant or breastfeeding. Right.

Amelia Barrett: Sure can.

Lindsay Weitzel: And do we have any idea the mechanism of why that might be helpful in setting a migraine?

Amelia Barrett: You know, really interesting question, Lindsay.

a lot of different mechanisms are speculated, but one of the big ones that's out there is that it seems to shut down the nerve fibers that are in the muscles, the information, the sensory information that's coming to the brain. And we all know that those afferents, especially from the trigeminal nerve, are part of what triggers migraine.

So that could be part of why it's working. But there are a lot of other theories as well.

Lindsay Weitzel: Okay. All right. So then we're going to move to one that we know we can take in pregnancy. Because I think doctors often tell people to take some extra omega-3s or, or a lot of people take fish oil to get their omega-3s, etc..

I know that it is one of the things that pops up if you Google, what can I take supplements for migraine?

but I don't know. Do we actually have data that this is helpful in the setting of migraine?

Amelia Barrett: We do have some data. The impact is not huge, I will say, but there was a systematic review published in 2018. They looked at 13 different trials and they did show a reduction in the duration of headaches,

which could be related to the anti-inflammatory effects of omegas, right? I mean, we know that there, you know, that that's the main thing that Omegas are doing for us.

So maybe it's similar to the way that other anti-inflammatories are working, even over the counter. And that's why we saw that shorter duration. Not entirely clear. They didn't see much of an improvement in, frequency, which I think is a you know, what a lot of us are looking for. We want to have fewer headaches overall,

just to reduce that headache progression to chronification and all the problems that that can cause.

But, at least we did see a little bit of benefit. There are some conflicting studies. Other studies have shown no benefit at all. So I think that the jury's out, still, to some extent.

Lindsay Weitzel: Okay. It is a safe one to take. If you found for some reason it was helping you.

and I did put these in the order of things that were safe to take during pregnancy or lactation, because I know we have such a high proportion of females in our audience, and people are always looking for things that they can take when they're pregnant or breastfeeding their babies. So I was trying to do everyone a favor.

so our next one is something that just so many people in the migraine community take. Let's talk about CoQ10. What is it? Why does it help? Does it help?

Amelia Barrett: Yeah, CoQ10 is another one that's helping the mitochondria. Just like vitamin B2 or riboflavin. It's helping in that very long series of biochemical events that give our cells the energy that we need. And, CoQ10 is good. It is also recommended by the AAN and the AHS. There was a meta analysis, published in 2021. They looked at six different studies and they did see reductions in headache duration and also frequency.

So pretty good one. Yeah.

Lindsay Weitzel: Okay. And do we know do we have a recommended dose on that.

Amelia Barrett: Yeah we sure do. It's 100mg three times a day. I know that three times a day is really hard. And everybody, if you want to just split it up into once a day or twice a day, we don't have any reason to tell you that's not okay to do, because I know at lunchtime, dose of anything in.

Yeah. Even if it's a prescription medication can be really, really tough.

Lindsay Weitzel: And then, is that one that we can take during pregnancy or.

Amelia Barrett: Yes, you absolutely can.

Lindsay Weitzel: Okay. All right. That is good to know. So that's another one that we've got good data for. So if you're looking for supplements go look that one up. So the next one is interesting because I started going through my I don't I don't want to sort of phase my,

thoughts that I want to define things to take because I couldn't take the pain anymore when I was, let's say, 11 years old, I started reading everything.

What can I take? And I think Feverfew was so popular then it was everywhere. So we're going to talk about fever for you. And people have been talking about this one for forever. So do we actually have data. That Feverfew is helpful in migraine?

Amelia Barrett: We sure do. And it definitely helps. It just doesn't have a huge impact. So

there was a review published in 2020 of six different studies which showed that it definitely has a statistically significant benefit, but it's on the order of less than one migraine attack per month. So people go down from maybe 10 to 9. So not huge when you do it preventively.

I think a lot of people take Feverfew acutely though, don't you?

Lindsay Weitzel: I've heard people doing that. I've. I don't think I've tried it. If or maybe if I did, I was kind of a little kid, as I mentioned, I was just, you know, an adolescent.

so. Yeah, but I definitely have heard people doing that.

Amelia Barrett: And it's in a lot of those migraine relief supplements that you find on Amazon, whatever. A lot of them have Feverfew in it, and it is an anti-inflammatory. In fact, that's where it got its name. It was used in ancient times to reduce fever. That's kind of where the name come from. So it makes sense that it would have, you know, a little bit of benefit acutely as well.

Lindsay Weitzel: Okay. And so there is some data behind that one. Do we have a recommended dose on that one?

Amelia Barrett: We sure do. It's 50 to 100mg a day. That is recommended by the American Academy of Neurology. So they are recommending it more as a daily preventive. Although as I said, I do think a lot of in real life, a lot of people use it just occasionally as needed.

Lindsay Weitzel: Okay. And then I was looking up because I was curious if it was still the same, if they thought it was still the same mechanism of action. And it sounds like we aren't sure anymore, but it used to be this component, this substance called, I think it's parthenolide or something like that in it. that we always thought was the reason it worked.

But are we sure about that or do we not know?

Amelia Barrett: You know, I it definitely has anti-inflammatory. Mechanisms, but it also has effects on blood vessels, which unfortunately leads to, uterine contractions. And it can cause early miscarriage. So you can't take it during pregnancy.

Lindsay Weitzel: Okay. So no, during pregnancy, what about lactation. Do we know.

Amelia Barrett: That we don't know actually.

Lindsay Weitzel: We just don't know okay.

All right, so the next one we're going to talk about is butterbur.

that one comes with a bit of a health warning. It's a little different than the other ones. But first, let's talk about whether there's data behind it that it actually works for migraine.

Amelia Barrett: Yeah. There are randomized controlled trials that show benefit. And it was recommended, by the AAN and an AHS in the past. But because of these health problems that you're talking about, that is no longer the case. So anybody out there who's taking it think twice.

Lindsay Weitzel: Right. So, it I do believe there are versions you can get that are healthier because there's a specific, component of it that is bad for your liver. And there are salt types that are sold where that component's been mostly revert removed. Excuse me. Is that correct?

Amelia Barrett: That is correct. Unfortunately, what's happened is that they've done studies looking at these PA free versions of butterbur. So that's pyrrolizidine alkaloids that's what the PA stands for okay. And so there are PA free versions of butterbur that are out there on the market. But unfortunately people have done some quality control on those and they still find the wizarding alkaloids in them.

So that just makes me nervous because there are cases of liver failure so severe that transplantation was required. And this was not just like a one off you guys. This was, I don't know, on the order of 10 or 15 people. I can't remember the exact number. But liver transplant is huge. I mean that's life changing. So in my mind, no matter how well it works, it is just not worth the risk.

But okay, that is my opinion. There is randomized controlled trial data to show some benefit.

and I think what's interesting about this drug is it's kind of the original CGRP blocker. You know, those are the latest and greatest medications in migraine. but it turns out that that's actually what butterbur does.

Lindsay Weitzel: Interesting. Okay. Well, we learned a lot that we learned that maybe we can't trust it health wise, even if we are not pregnant or breastfeeding. So we might need to stay away from that one, for now. So we've learned a lot in this particular podcast episode. that was an exciting one, even for me.

I haven't, you know, been I feel like I've been keeping track of these different supplements for years and years, but I don't always, look at what they do.

And why. And then more information comes out. So I really was excited to do this episode. So I hope everyone found something interesting in this particular episode. And you are so knowledgeable on this. Thank you for being here today, Doctor Barrett. Sure. Thank you everyone for listening. And if you have any questions, feel free to type them in and hopefully we can get you an answer.

So please join us again next week for our next episode of HeadWise. Bye.