



Your Functional Medicine Expert®
Jill Carnahan, MD ABHM, ABOLM, IFMCP

[#50: Dr. Jill interviews Sahar Swidan, Pharm.D. on Pain Management Strategies](#)

Dr. Jill 00:12

Sahar, we are live, and it is so great to connect with you here! I love the bright yellow color! Like we were saying before, you're in Michigan, I'm in Boulder, and we usually have sunshine, but today it's about one degree outside and it is very, very, very cold and there's no sunshine. And probably the same in Michigan, right?

Sahar Swidan, Pharm.D. 00:29

The same in Michigan. We don't see the sun for a few months right now.

Dr. Jill 00:33

Yes. I grew up in Illinois, so I remember there were like six months of mostly gray.

Sahar Swidan, Pharm.D. 00:38

Yes. Doom and gloom, I call it—doom and gloom season.

Dr. Jill 00:41

Yes. So just a little housekeeping: If you haven't watched our YouTube Lives and Facebook Lives here, you can catch all of them on my YouTube channel just under 'Jill Carnahan'. And if you want more information on free blogs, you can go to my websites: JillCarnahan.com and Dr.JillHealth.com.

Dr. Jill 01:01

Today I want to introduce our guest speaker, Sahar Swidan, who is a PharmD. She obtained her doctor of pharmacology degree and completed three years in a biopharmaceutics research fellowship at the University of Michigan. She started her career as a clinical pharmacist for the inpatient head and chronic pain service at Chelsea Community Hospital and then progressed to director of pharmacy. In 2001, she founded Pharmacy Solutions in Ann Arbor, Michigan, a unique, personal, and educational specialty pharmacy, and served as president and CEO. In addition, she's a Clinical Associate Professor of Pharmacy at the University of Michigan College of Pharmacy. She's board-certified and an advanced fellow in anti-aging and regenerative medicine. [She is] an internationally known speaker in the areas of pain management and bioidentical hormone replacement. She's also the author of several books, one of which we'll be talking about today.

Dr. Jill 01:56

I'm just so delighted to have you because this is a topic that we need more information on for all the people listening today, and that's pain management options. And you've just got done writing a book about this. So tell us first: What brought you to write the book about this?

Sahar Swidan, Pharm.D. 02:10

I've written several book chapters with my colleagues and [have done] lots of research and publications. And I always tease: It's like having a child. You always say you do it once and then you go, "I'll never do this again." And then you end up doing it again. So with the book, it's the same thing. I really felt mainly, honestly, the humanitarian effort to really help teach a lot of advanced tools or additional tools, at least, in our toolbox for pain management.

Sahar Swidan, Pharm.D. 02:40

As we know, the opioid crisis has really been highlighted, especially more recently. I really think we had an opioid crisis all along. This was nothing new, but it was very [much] highlighted more recently. And then a lot of doctors were basically told: We need to get away from prescribing opioids and only use them much more judiciously, which should have always been the case. But also, now we've really taken one of the tools away and we've had tons and tons of patients on these opioids for years. And now they were basically naked, if you will. They had their opioids taken away. We didn't really teach our colleagues. And a lot of us don't know some of the additional tools that are available in our functional integrative holistic medicine world, if you will. And I just really wanted to provide our colleagues, clinicians, and patients with some additional tools to really look at so they can add to their armamentarium in the treatment of pain management.

Sahar Swidan, Pharm.D. 03:40

And pain, as you said, Jill, is basically the number one and number two leading causes of disability worldwide. Back pain is the number one cause of disability worldwide, and migraines are actually number two. I've always worked in this field and in pain management and it's very disabling. Really, in school, all of us learn: What do you use for pain? Well, you use non-steroidal anti-inflammatories, if you will, opioids, and, "Oh, ice and heat too," basically. That's kind of what we were all

taught. And now the opioids came off and a lot of those patients and clinicians were stuck, going, "Well, what else can we do?"

Sahar Swidan, Pharm.D. 04:17

And this was really the crux of the book, where I brought some of my colleagues from around the globe who are doing some really unique, innovative additional tools [so] that we can provide our clinicians with these additional tools. [Tools] that they're already aware of with the medications, physical therapy, and other traditional things that they used to add to their armamentarium. [The purpose is] to give them tools—and the patient, honestly. Tool, help, and hope, as I call it. So that was mainly why I teased the humanitarian effort here to bring all these clinicians who are very passionate about this. We put all of our collective minds, tools, and skills into this book called *Advanced Therapeutics in Pain Medicine*.

Dr. Jill 05:02

I am so excited! And of course, we're going to link to your book and your website here and then on YouTube and everywhere that we show the video. We'll be sure to share so people can get more information or purchase a copy. But first, we met with A4M and several other organizations where we teach. And I just love [that] you bring such a wide breadth of knowledge. And because of your pharmacy background, what I've seen from you to someone like me as a clinician is that you bring some ideas of how we can approach prescribing, whether it's compounding or other things, to get some unique things that will help our patients. You give our toolbox more tools that we have to use.

Dr. Jill 05:42

So in pain management, we've got things like fibromyalgia, chronic migraines, or, just in general, pain from back issues or other things. And again, what we used to have were opioids, and we're getting a lot more regulations on that and [having] difficulty prescribing them. So how would you first approach someone who's had chronic pain and make recommendations around some of the tools that they would have? Say someone had a back injury and either had surgery, never fully recovered, or still has chronic back pain. Let's just use that as a classic example. How would you approach that patient or make recommendations to physicians?

Sahar Swidan, Pharm.D. 06:18

Yes. Obviously, it's always a pleasure to lecture with you, and we've lectured in a lot

of circles together. In our world, first and foremost, we'll always look for the root cause because, a lot of times, pain is the symptom and masquerader of other things that lie underneath. So, just like you, we always look for the root cause. What could be causing this?

Sahar Swidan, Pharm.D. 06:44

Now, with chronic pain and pain management... I'll age myself now, per se. God, probably 20 to 25 years ago—when the Joint Commission started [saying] that pain is the fifth vital sign. Remember? I was literally flying all over the country to try to implement pain as the fifth vital sign in the regulations and things like that. And now we're honestly flying just as fast to kind of unwind that.

Sahar Swidan, Pharm.D. 07:17

And please remember that acute pain management is very different from chronic pain management. When a person injures their back, for example—let's take that as an example—we want to be aggressive and treat that, find the root cause if we can, fix the issue, and help them because the more pain that people have, the easier it is for the pain to continue, flourish, and expand, if you will. You literally almost build pain highways, as I call it, because if you keep bombarding that same track... If you have a highway that's constantly being bombarded and congested, what are you going to do? You're going to go to offshoots and try to get off different exits to try to bypass that and really sprout new pain pathways.

Sahar Swidan, Pharm.D. 08:07

That's why sometimes we have patients that start with back pain and then, "Oh my god, they got knee pain," and "Oh, all of a sudden now their whole body hurts"—it's fibromyalgia—and then furthermore. Or they have migraines or they have a lot of these comorbidities. Once the pain becomes what we call centrally sensitized in the brain... Remember, pain signals go up the spinal tracks, if you will, up to the brain, knock on the door, and say: Hey, you hurt.

Sahar Swidan, Pharm.D. 08:36

And pain is not bad, right? Pain is the body's internal warning system, telling you: Hey, something is wrong; you need to address it. Yet when it's that constant bombardment of pain, that knocking at the door, and we're not addressing it or

fixing it, the brain becomes basically centrally sensitized. And then we cause what's called neuroinflammation, or kind of fire or inflammation, in the brain.

Sahar Swidan, Pharm.D. 09:03

That's why, when people have pain, they tend to get other pain symptoms much more easily. It's like when you have a cup and you keep sticking your hand in vinegar water, salt water, or something. That's going to keep aggravating it. That's why it's very important to address acute pain, fix it, and stop it from continuing so we can stop the central sensitization phenomenon because then it's much harder to treat.

Dr. Jill 09:28

Yes, so say we have acute pain. And the opioids are perfectly appropriate for these kinds of conditions. It's just that [for] long-term use, there are other options and things. Let's first start the root cause real quickly. Let's talk just a little bit about that. Of course, autoimmune inflammation, the gut and dysbiosis and issues there, environmental toxicity like mold, and infections like Lyme disease—all of these things can create pain pathways and worsen the pain. I've seen mold cause neuropathies. I've seen it cause zingers and ice pick pains, severe migraines, and headaches related to histamine. I've seen gut issues cause chronic pain and issues there. Of course, Lyme co-infections—all these infections can cause pain pathways.

Dr. Jill 10:12

So the first thing you probably recommend is having your functional doctor look at other things that are root causes. I know that's what I do. But what about prescribing or alternatives—maybe even natural? Let's talk first about prescription options. And then we'll go to natural substances and things that we might use for pain.

Sahar Swidan, Pharm.D. 10:30

Yes. And just a point on opioids. This has been well known, and this is not anything new. There is a phenomenon called opioid-induced hyperalgesia. What that means is that, actually, opioids can cause more pain. So when we have more pain, we use more opioids to try to trump the effect, if you will. So sometimes patients get stuck, if you will, in the cycle of this opioid-induced hyperalgesia, which could be one of

the propagating symptoms for the pain. That's why it's also important to see: Is that the issue?

Sahar Swidan, Pharm.D. 11:04

The other thing in our world, obviously, Jill, as you know, is that opioids can also... So chronic, not acute. Now, again, we're not talking acute. Short-term use for post-surgery, post-dental stuff, acute injuries—of course, you can use opioids for that. But it's the longer-term [opioids]—they can also cause endocrine dysfunction, [for] which we know hormones are very helpful in modulating pain and inflammation. So, opioids can actually cause hormonal dysregulation, which can also propagate pain symptoms.

Sahar Swidan, Pharm.D. 11:04

So, as far as [the question]: What do we use? Historically, honestly, what we had—I always called it—was band-aids. We had band-aid medicine, not necessarily fixing the root cause but trying to help. So, some of the things that we use besides the typical nonsteroidal anti-inflammatories and steroidal anti-inflammatories: The acetaminophen—Tylenols of the world—and those kinds of things we've always used. Obviously, it's an over-the-counter type of help. Some of the prescription medications, obviously, people are very familiar with. We've always used kind of the antidepressants, or that class of drugs was used. The anti-seizure or anti-epileptics were kind of repurposed for pain management.

Dr. Jill 12:24

And, Sahar, we've got physician listeners that will know those classes and we've got a lot of patients and laypersons that won't know what you're talking about. So for those classes, let's give examples of each one. You mentioned Tylenol, which is nonsteroidal. And then also Advil, ibuprofen—

Sahar Swidan, Pharm.D. 12:43

Yes, the non-steroidals are your typical Motrin and ibuprofen and [inaudible] [and] the Tylenol or acetaminophen type of group. That was mainly over the counter. And then you have a lot of those—[things] like Icy Hot—cooling/warming type salves and ointments that patients would use, obviously. Now, [with] some of the prescription medications for the antidepressants, people are familiar with those: The Prozac of the world, the Paxils, or Cymbalta (duloxetine) of the world. These obviously help modulate brain chemicals. So the goal here is that we can modulate

and maybe increase your happy hormones, as I call it, [and] increase serotonin, which is [inaudible].

Dr. Jill 13:29

Exactly. Studies show that lower serotonin or lower dopamine [levels] not only induce depression but [also] more pain. So there is a correlation with the neurotransmitters, like you said. [With] lower levels, you may be more prone to pain syndromes.

Sahar Swidan, Pharm.D. 13:44

Yes. With pain, you have what we call excitation in inhibitory pathways. You've got the volume turned way up and our goal is to tone the volume down. You have these pathways basically in your spinal tracts and brain. Literally, they're called excitatory and inhibitory. It's like, I amplify the signal or I turn it off. So serotonin [or] dopamine—I help modulate it and kind of turn it off. Our goal is to turn the volume down with these drugs, increase the inhibition, or calm down these signals.

Sahar Swidan, Pharm.D. 13:44

Some other things that we've used: The anti-epileptic drug class or anti-seizure. The big one that's probably used for pain and that a lot of people are familiar with is gabapentin or Lyrica (pregabalin). But we've used a lot of the other anti-seizure medications, like the Tegretol type/class and Lamictal, things like that, that we use for different pain syndromes and Keppra. Those medications are used.

Sahar Swidan, Pharm.D. 14:45

Sometimes even blood pressure-type medications would be used in pain management and migraines, like ACE inhibitors. Examples are lisinopril or candesartan, [which] has some data published on migraines. Calcium channel blockers have been used. Beta-blockers like Verapamil and Atenolol and that kind of drug class can be used in various pain syndromes, migraine syndromes, and stuff like that. They're definitely for something else, but we've repurposed them to try to help.

Sahar Swidan, Pharm.D. 15:19

And sometimes we've used it with certain pain syndromes, like CRPS, which is a specific [inaudible] neuropathy [and] probably one of the worst neuropathy pains of all kinds of causes: Fibromyalgia, which is a really subtype of small fiber neuropathy. Sometimes we use anti-arrhythmic type drugs—things that help regulate your

blood or your heart's conduction or your heart's electrical signals, if you will—to help with these pain signal transmissions. That we've also used.

Sahar Swidan, Pharm.D. 15:55

So that's what we've always had at our fingertips—drugs for different things—but we tried to modulate either the electrical signals, increase your happy hormones, or increase the effect of the calming drugs on your calming down pathways. And that's why it's also important to continue to do that. For as much as we love to use our integrative functional medicine, always do the lifestyle, find root causes, supplements, and vitamins, [do] physical therapy, [do] saunas, and all this good stuff that we will talk about.

Sahar Swidan, Pharm.D. 16:34

Sometimes we still really need these additional pharmaceutical and pharmacological tools to get into the brain, if you will, and calm down the central sensitization. That's how we really achieve longer-lasting and true treatment of the cause, not just band-aiding it.

Dr. Jill 16:54

You did a fantastic job overviewing pharmaceuticals. Again, there's such a place for those. Let's move. I want to talk about non-medicine, or herb options, of which there's a lot as well. Let's talk quickly about herbal and other options. I've seen such great benefits. And I know off the top of my head that turmeric and curcumin are so powerful—anti-inflammatory. I love Boswellia. Personally, that one actually does better for me than turmeric. And then there are combinations of NRF2 modulators and things that are pathways for inflammation. What are some of your top favorite herbs and combination products? And there's CBD, which is a whole other thing. I would love for you to go through, just like you just did, some of your favorite anti-inflammatory herbal [supplements] or other types of things that are natural substances.

Sahar Swidan, Pharm.D. 17:39

Yes. Absolutely. We always focus on the gut, gut, gut, as I always say. When in doubt, I always start with the gut, I always say. Definitely, we really need to fix that. I love probiotics because we know they can help the gut, but we also know they can modulate the immune system. And we know a lot of times it's immune

dysregulation that also trips the immune system and propagates the pain syndrome. So I love probiotics and digestive enzymes. Now, also digestive enzymes—yes, we use them in our world to help digest food—if they're taken on an empty stomach, they're very anti-inflammatory.

Sahar Swidan, Pharm.D. 18:15

And there's great data out of Germany using—and there are very specific digestive enzymes—Wobenzym. A lot of clinical trials were done on those as an anti-inflammatory for pain management, mainly. So I love those to start with. And then [there are] some of this other herbal-type stuff—anything that exactly reduces inflammation. And unfortunately, nowadays, we're all swimming in a bath of toxins, as I call it. So our systems are all upregulated and inflamed. So things like curcumin...

Sahar Swidan, Pharm.D. 18:47

Curcumin does interact with certain medicines. So as a disclaimer, in the beginning, always double-check with your clinician, your healthcare provider, your doctors, and your pharmacist to make sure the medication regimens that you're on do not interact with these natural supplements. A lot of times patients think: "Well, these are natural; they're not going to do anything with my meds." And I always tease and remind patients: "Well, cyanide is natural too, and look what it does to you." So it's very important to make sure they're not interacting in adverse ways.

Sahar Swidan, Pharm.D. 19:20

So curcumin I love. As you said, Jill, it's very anti-inflammatory. It really helps. A lot of clinical trials have been done with that one too [on] different pain symptoms and autoimmune disorders, and it can be very helpful. Boswellia—I love, love, love. We use this one tons—actually more in our migraine patients—because, in some patients, it tends to work much better for them, as you said for yourself. Also, it penetrates the blood-brain barrier a bit better. So for migraines and other neuropathy-type stuff, I tend to like Boswellia for those same reasons.

Dr. Jill 19:56

That's so interesting because I did not realize [it]. And then there's one other thing with turmeric. Most people do amazing[ly well with it]. It's even got anti-cancer and anti-inflammatory benefits. But for some persons, like myself, who have a little bit

of a histamine issue, sometimes curcumin or turmeric can be a little bit histamine-inducing for mast cell [activation syndrome] patients. And then, I find, like you said, Boswellia is a better alternative just for that subset—even though I would say 90% of people do really well with turmeric.

Sahar Swidan, Pharm.D. 20:23

Yes. And with Boswellia, [it should have] the five blocks in the extract. Also, with supplements, as you guys know, there's a huge difference in quality out there. It's very important to get a quality-vetted professional line—like the Jills of the world, and many other people—to make sure that it's a good-quality supplement that's well-vetted and also pharmaceutical-grade because there could sometimes be impurities that could obviously be harmful to you and not helpful. We see a lot of European studies; they'll show great benefit and then when we do the trials in the United States, they show no benefit. Then I go, "Well, how can that be?" And a lot of times it's really due to the quality of the supplement because our process here for supplement approval is very different.

Dr. Jill 21:07

It's very different, isn't it? And I love that you mentioned the German enzymes. So these are proteolytic enzymes. Basically, proteolytic enzymes—if someone has soft tissue, lipomas, tumor growths, or things—tend to chew up some of the tissue. And they're very anti-inflammatory—in the actual vascular system. I always think of it like little Pacmans; they're actually enzymatically chewing up and destroying some of those inflammatory molecules. Our favorite one, like you said, Wobenzym, has some of the most data. It's from Germany, I believe. But there are lots of proteolytic enzymes of good quality that are similar in nature.

Sahar Swidan, Pharm.D. 21:49

Yes, absolutely. And then the other one, obviously, is fish oil. As we always say, you can Google any disease and you'll find a study with fish oil. It's very anti-inflammatory. Part of the fish oils can contain these SPMs or pre-resolving mediators. So I love SPMs also.

Dr. Jill 22:09

I was totally going to mention that because that is my favorite. If you guys haven't heard of SPMs, there are now lots of manufacturers. One of the originals was Metagenics SPM Active. But there are lots and lots now. MegaSpore has

MegaOmega, which is fish oil plus SPMs. And I think Designs for Health has one, and I'm probably forgetting to mention some other companies. But do you know any of the other ones that might be out there that are really of good quality?

Sahar Swidan, Pharm.D. 22:35

Yes. There's Omaprim, I know. And then OmegaXL is another great one, with a very high content of SPMs in it. And they're looking at that. So yes, OmegaXL is another one that I use. Omaprim is the professional line for physicians with high SPM doses. Also, that's great.

Dr. Jill 22:56

And SPMs actually act as an antiprostaglandin, which is one of the main pain pathways. So if you have mast cell activation and pain issues, or you just have pain from inflammation, the SPMs act as an antiprostaglandin. Is there any other mechanism that you know with SPMs?

Sahar Swidan, Pharm.D. 23:13

Yes. SPMs—again, I love them because they're really root cause, that's why they're called resolving mediators. Literally, they're not just band-aids. They really try to go: What's off-kilter in the immune system? What's spewing all these angry hormones or these inflammatory mediators? And it tries to level everything off. And that's why I really like them—because of that. So that's another one that I love. [Also], fish oils, SPMs, and curcumin.

Sahar Swidan, Pharm.D. 23:45

I also love quercetin—you mentioned this, Jill—because I always see that it's the forgotten side of the immune system. A lot of times, in pain patients—especially patients with migraines and patients that have Ehlers-Danlos [syndrome] or hypermobility syndromes—we tend to see mast cell activation syndrome very commonly in them. Obviously, that could be caused either genetically or from what's going on, whether it's mold, Lyme, or other things that cause mast cell activation syndrome. And in patients with POTS, or postural orthostatic tachycardia syndrome, we see this very commonly in them. The crux of it and the root cause is really this mast cell activation. So quercetin—which is what you get from onions and garlic and all this good stuff that we all should be eating lots of—has great trials in lowering histamine.

Sahar Swidan, Pharm.D. 24:37

And I always say, if these allergic-type patients... [For] the patients that come into you and go, "Oh, I can only eat chicken, rice, and peas, and that's it," really tune into mast cell activation. Things like quercetin can be very helpful and also in pain because it's one of the inflammatory instigators of pain. Methyl sulfonyl methane, I love because it's anti-inflammatory. SAME, which is what we call the universal methylator—

Dr. Jill 25:05

Yes, I love it. Just a note—it's so interesting because you talked initially about antidepressants having some anti-pain effect—SAME has been studied head-to-head in front of some of the major antidepressants like Prozac and Paxil, etc. Actually, at the 1200 milligram dose, it really beat out the symptom improvement of almost all the major SSRIs. So I love SAME for energy, mood, and anti-inflammatory pain pathways.

Sahar Swidan, Pharm.D. 25:32

Yes, actually, in Europe, as you mentioned, it's the number one drug antidepressant that's used. So it's approved in a lot of European countries as a medication. [It has] great data on pain and stuff. But again, be careful. Start low and go slow because sometimes in your really toxic people, in your slow methylators, or if they have genetic SNPs, when they're not mobilizing that wheel, if you will, sometimes they can start detoxing or over-neuromethylating, and you can really cause a lot of brain excitation to get agitated and anxious. Or they feel horrible because now they start offloading all these toxins that they've been bagging and storing for years.

Dr. Jill 26:15

That's an interesting thing because I want to mention a little pathway here. And again, some of our listeners are really savvy to this. But when you over-methylate, if you have upregulated CBS enzymes—you might see that on your genetic detox pathways—you can produce metabolites that cause more pain. And I'll tell you, one of my little secret weapons is that I do have a fast CBS. So on urinary organic acids, I would always have high cysteine and taurine. That was one of the ways that you could tell, because those are metabolites of that pathway. But interestingly enough, that caused more stiffness and pain. And molybdenum tends to detoxify that pathway if it's going too fast. So for me, molybdenum actually took away my pain and stiffness because of the CBS pathway. But that trace mineral, molybdenum, you

would never think of as a first line for pain, right? But we know the pathway with the CBS. For me, it was kind of magical to take that and be like, "Oh, my stiffness is gone."

Sahar Swidan, Pharm.D. 27:07

Yes, exactly. We've been practicing personalized medicine forever, but now it's making splashes even in mainstream [medicine] because of all these little quirks that you find in genetics, epigenetics, and things like that. We really mobilize the different pathways and really help people. The other one, like you mentioned, was CBD.

Dr. Jill 27:28

Yes. Let's talk a little about CBD.

Sahar Swidan, Pharm.D. 27:30

Yes. That's a whole other 50-hour topic for today. But definitely CBD—I call it the master orchestrator. It's the orchestra conductor. It sits on top of all your brain chemicals and inflammatory pathways, and it really tries to modulate them. So definitely, there is some good data on CBD modulating inflammation without the sometimes THC-associated central effects that people don't like—getting dizzy, high, and all these different things. And I'm not a huge fan of smoking just because of all the other additives, unfortunately, and toxins that patients will get. But I think [for] CBD, a clean, organic CBD source that's been well made with CO2 extraction [is best]. So again, the quality here is paramount because there's so much garbage out there—and dangerous garbage, some of it. It's very important to look for people who really know what they're doing with CBD [and that] it's organic, because the marijuana plant requires a lot of pesticides, herbicides, and things like that. So you want to get organic because you don't want to increase your toxin burden. That can just continue to increase inflammation and pain. So that's another one that I love to use.

Sahar Swidan, Pharm.D. 28:52

The other one that I love to use, which [has] great data out of Europe, is called PEA or palmitoylethanolamide, which I love for pain, especially for neuropathy, sensitization, and fibromyalgia, or this heightened pain perception. PEA, because it's kind of like CBD and Boswellia, and quercetin and [inaudible] are kind of stuck

together. And it really helps with these different sensitization pathways. And [there's] great data, like I said. We have over 35 to 40 clinical trials on it. So some of these supplement companies—I think Life Extension and some of the other ones—are now beginning to add it. But I love that one too, which I use a lot, especially with fibromyalgia and total body sensitivity syndromes.

Dr. Jill 29:41

One other thing I just thought of as you were talking about fibromyalgia: One of the reasons that sometimes that tissue tenderness [occurs]—this is not a muscle-specific or joint-specific pain, but it's tissues, which are kind of like our connective tissue areas, even the areas that acupuncture addresses—[is] from lactic acidosis. So one of the things that's very simple and very cheap to help with lactic acidosis is either alkaline water or mineral water, and also calcium or magnesium lactate, which comes as cheap as can be as a supplement. And sometimes, if you have that pain in your tissues and you have lactic acidosis, those very, very simple things will help some of that pain.

Sahar Swidan, Pharm.D. 30:24

Yes. And let's talk about fibromyalgia, maybe for a couple of minutes, just because it's so common.

Dr. Jill 30:29

Perfect, yes.

Sahar Swidan, Pharm.D. 30:32

A lot of times, fibromyalgia is usually either an autoimmune disorder that has not been diagnosed or thyroid dysfunction. So then the body is kind of working on fumes, [as] I call it. It's not getting the cellular energy, or it's mitochondriopathy or mitochondrial dysfunction. That's why they tend to hurt, as Jill said. Their cells are operating on fumes that don't have real gasoline. So a lot of times magnesium—[there are] great clinical trials on magnesium helping. And I love magnesium and I wanted to talk about it separately with fibromyalgia and all pain syndromes. So I told you the brain gets sensitized in this brain inflammation, if you will, or hypersensitization. There are these specific receptors called NMDA receptors in methyl [inaudible]. They're excitatory brain receptors, if you will, that propagate that signal. And actually, magnesium is the gating ion that shuts them down.

Sahar Swidan, Pharm.D. 31:34

So magnesium is critical to put on board for any acute pain syndrome unless they have heart blocks, other contraindications, or kidney disorders, where we have to be really careful and not use them or things like that. But what it does is really decrease the likelihood of an acute pain syndrome propagating into a chronic pain syndrome. So I love magnesium for fibromyalgia and any pain syndrome. [There is] lots of data on it in variety, especially in migraines and fibromyalgia. Cellular energy things: Magnesium lactate, coenzyme Q10, D-ribose, and then NAD. I wanted to talk for a couple of minutes about NAD.

Dr. Jill 32:15

Oh, my favorite! I want to hear about NAD.

Sahar Swidan, Pharm.D. 32:21

Also, I always say patients in pain are basically amped 24/7. So cellular energy-wise, they're very deficient. Their body is going: You hurt, you hurt; something is wrong. And literally, when something is going on like that in the body, just physiologically, your whole system is amped. It's in fight mode, so they tend to be very deficient in cellular energy. So a lot of times you'll be amazed when we give pain patients cellular energy with CoQ10 and acetyl-L-carnitine, which are supplements and D-ribose and NAD, which I love. You could use it as a patch. Some providers are obviously providing IV-type infusions. More and more data is being collected on it for opioid addiction and other types of addiction for detox. But for cellular energy, I love NAD. We have a whole chapter on that in the book.

Sahar Swidan, Pharm.D. 33:18

Low-dose naltrexone—I love that. I always tease: We should put that in the water because everybody has immune dysregulation now, unfortunately. And naltrexone is a medication that was approved a long time ago for opioid and alcohol addiction. But low-dose [naltrexone] is very different. What low-dose [naltrexone] does is really kind of re-regulate what's dysfunctional in the immune system and really bring it to balance. And there's a lot of data on low-dose naltrexone in a variety of different pain, autoimmune-type syndromes, and chronic pain syndromes, where it can be very helpful as an additional tool. Also, [it helps with] fibromyalgia because, really, more and more, we're finding out it's probably a small fiber nerve neuropathy

or small fiber neuropathy. And all these other approaches that we've been talking about with fibromyalgia, like gut rehab, inflammation, thyroid disorder, and autoimmune-type stuff, help their cellular energy and their gut rehab.

Sahar Swidan, Pharm.D. 34:23

The other tool that I use with fibromyalgia patients... If you come in and they go, "Well, I want you to eat paleo, organic, all clean. Cook three clean meals a day. I want you to exercise an hour a day," and all that stuff, they look at you like you're nuts because they can barely move and they hurt so bad. So one simple thing, in addition to these tools that we just gave you guys, is: Go in warm-water pools. I always tell patients to do that. I say: "Just go in a warm water pool. Don't move. I don't want you to even do anything." And you'll be amazed because even just the water pressure on the cells will actually push the lactic acid out and they just feel so much better from not even exercising.

Sahar Swidan, Pharm.D. 35:05

Usually, they go: "Oh, I can do that. I'll go in and not move." And then, when they feel a little better, I go: "Okay, how about you just move your arms just a little bit and your legs a little bit?"—because we just need to get the lactic acidosis, like you said, out of their cells. And then they feel much better. And then we can ask them to do all these other good things that we want them to do. But initially, I see a lot of my colleagues do that and they just turn them off because they feel horrible and they're very painful. Warm water is just amazing. Or if they can take—I call them detox baths—warm water where they can put a little bit of Epsom salt, baking soda—

Dr. Jill 35:41

I am a huge fan of Epsom salt baths. I recommend them all the time because every single night, that's part of my nighttime ritual. And I'll recommend the Costco six-pound bags or wherever you get them. I'll use half a bag per bath. I mean, you saturate that water because when you saturate the water, that gradient will actually drive the magnesium sulfate into your skin and tissues a little bit more than you would if you didn't have that water saturated. And then the essential oils you can blend in there with lavender or eucalyptus. It makes a wonderful stress reduction, sleep inducer for insomnia, and pain management all in one.

Sahar Swidan, Pharm.D. 36:19

Exactly. It's like one of the best brain-calming supplements and trace minerals that

we have. Even when people can't sleep, that's the first thing I recommend because it's just so brain-calming. I love lavender. I kind of choose lavender more than the other ones, mainly because it is so calming. They've done studies on lavender essential care, causing that theta wave in the brain, causing that deep calm, if you will. Oxytocin is another one—the love hormone per se. That's another one that's making [inaudible].

Dr. Jill 36:56

And with your physician, you can get it compounded into a nasal spray or a lozenge. If you take it orally, it will not withstand the stomach, so you need to take it alternatively—either transdermal, sublingual, or as a nasal spray. But it does tend to be very powerful. What I found with oxytocin, too, is that it can help regulate ADH dysfunction in mold patients who have trouble regulating their hydration.

Sahar Swidan, Pharm.D. 37:23

Yes. And that's another one that's really making splashes. And it's kind of rebooting, [as] I call it. So part of the reptilian is the limbic system. And this is what we call "the pain experience," because we have patients who go, "My pain is really bad," but we don't see the physiological sign. Sometimes it's really what we call this wind-up and wind-down phenomenon of pain. And the hypothalamic systems where oxytocin works in the limbic system are very involved. So that system gets activated. When you are embarrassed, you flush, right? It's an emotion that's translated into a physiological function. So it's kind of the same thing. The limbic system gets involved in the pain experience or processing. And sometimes oxytocin in pain people is very helpful in solving that.

Dr. Jill 38:19

And it's related back to the serotonin pathway. It tends to be an adjuvant to serotonin as well. [We're in] our last few minutes. I can't believe this—we could talk for hours. This is such a great topic! We might have to have part two because we're just scratching the surface. But one thing I want to make sure to leave patients or listeners with that we haven't talked about is things other than supplements, herbs, and nutrients. And we talked about Epsom salt baths. What other things? Have you found any other therapies that are really powerful for pain? What would be your top three other treatments that might be helpful for pain?

Sahar Swidan, Pharm.D. 38:57

Yes, so absolutely, acupuncture, right? We have a lot of data on acupuncture, and we use that a lot. Physical therapy, myofascial release, craniosacral—those types of things. I love all of those additional types of tools.

Dr. Jill 39:15

I just want to comment really quickly on craniosacral. In most of my patients, I see a lot of environmental toxicity, Lyme disease, and mold toxicity. And their limbic system is upregulated, all across the board—100% of them have a limbic activation, which is the fight or flight [response]. And that definitely, if there's pain underneath, will make the pain worse. So I love craniosacral for one of the ways for limbic retraining—basically calming that limbic system. And it's passive therapy versus going online and doing a course, which I think could be great too. But I love craniosacral in the sense that someone can actually receive the treatment versus going out and doing one more thing.

Sahar Swidan, Pharm.D. 39:52

Yes, absolutely. I love that. Also meditation. We want to turn up that parasympathetic response—in anything, but especially in pain patients because they're so parasympathetically driven. They're in fight mode all the time. I love meditation, nature, calming, prayer, qigong, or whatever is your happy zone, I call it. Find it and do it at least twice a day, because there's a lot of data showing how we can activate the parasympathetic system. And that also modulates the pain signal. It's kind of the rest and digest system. So I love that. We know stress reduction [is important]. Definitely, cortisol and adrenal dysregulation are very involved in pain and inflammation. So we think physiological or psychological stress—or whatever the body doesn't know, it just goes: I'm stressed! So anything that modulates the adrenals—the inflammation, the stress response—[may be beneficial], because that sprouts inflammation. We know that when we have adrenal dysfunction, we don't have [efficient] brakes on inflammatory pathways. So definitely, working on that system [is important]. So whatever your happy spot—

Dr. Jill 41:10

So adrenal herbs, if people are listening: Rodielle is a great one. Phosphatidylserine. Phosphatidylcholine is another pathway, but that can be helpful too. And then magnolia or honokiol, is another one that I just love for modulating higher cortisol levels.

Sahar Swidan, Pharm.D. 41:25

Yes, absolutely. And that's what's nice about these adaptogens, because if cortisol is higher, it lowers it; if it's lower, it brings it up. So it really modulates into that happy zone, along with stress reduction and better sleep. Sleep is critical for pain management—getting quality sleep. We're using more and more melatonin, obviously, if you need it. If you don't need it, you don't need it, because your body makes it. But we used to think melatonin was just kind of, "Oh, it just puts you to sleep," and now we're finding a lot more of its anti-inflammatory, antioxidant, and immunomodulatory effects.

Dr. Jill 41:59

Yes, there are new studies coming out on melatonin.

Sahar Swidan, Pharm.D. 42:01

On melatonin. So all the good stuff that we all should be doing: Less stress, eating better, eating healthy, clean anti-inflammatory diets, acupuncture, craniosacral [therapy], stress reduction, good sleep, and lots of water. Hydrate. Hydrating pain—sometimes we forget about simple things. We're made out of 70% to 80% water. And if you don't have good lubrication in your joints, that's going to hurt. So even just water and those typical things that we forget about, it's very important to remind all of us—including us clinicians—to do and also help remind our patients to do. And a lot of times, you really have to do this into a cohesive approach, because sometimes just one tool and one dart are not going to fix it. But a lot of times, we get high success levels when we really integrate a lot of these different tools and hit these different pathways.

Dr. Jill 43:02

So many people want a one-size-fits-all. And as you heard already in these 45 to 50 minutes, there are so many levels and layers. Like, mast cell activation treatment or detoxification, there's usually no one pill that's going to do all the pathways. So it may take a little trial and error to get this. We have just chocked-full this interview with information. Where can people find [out] more about you and where can they get your book?

Sahar Swidan, Pharm.D. 43:29

Yes, absolutely. Good old Amazon like everybody, right? So you can find the book on Amazon.

Dr. Jill 43:35

And say the title again for people who didn't hear it.

Sahar Swidan, Pharm.D. 43:38

The title of the book is *Advanced Therapeutics in Pain Medicine*. My website, specifically, is Sahar.world. That's where you'll find a lot about me, the book, and the skincare line that I have. Again, I'm very passionate about clean living, like Jill. So that was my other fun side project to make: Skin foods that kind of speak our language with clean living, if you will. Just like with anything, you don't want to be slapping all these toxins on your body that you use every day, whether it's your cleaning products, your skincare products, your daily hygienic products, and so on. So that's where you can find all about me and all the lectures that we always do, myself and Jill, in our different circles.

Dr. Jill 44:30

Yes, so I will link up here and below on YouTube. You will find those links. And like I said, I think we're going to have to do part two because there are so many good questions and [pieces of] information here. And everybody's asking about more information, so I will be sure and direct them to your book. Was it written more for patients, clinicians, or both?

Sahar Swidan, Pharm.D. 44:48

Really both. Sure, there are some technical terms—just like now, we will throw it out—then we explain them. So absolutely, it's for clinicians and it's for our patients because we really wanted to provide for all to just learn these additional tools that are available to them to really help them in their healing and journey to wellness.

Dr. Jill 45:11

Fantastic! Well, thank you so much for your time this Friday. I look forward to catching up with you soon. And everybody listening, thank you, and have a great day! We will be sure to include all the links we mentioned below.

Sahar Swidan, Pharm.D. 45:22

Thank you for having me; it was a pleasure!

Dr. Jill [45:24](#)

You're welcome!