



MIGRAINE WORLD SUMMIT

TRANSCRIPT

INTERVIEWS WITH WORLD-LEADING EXPERTS

THE NERVOUS SYSTEM, STORED TRAUMA & MIGRAINE

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Introduction (00:05): And yet, what we're coming to realize is the trauma is a body response. The body has an autonomic nervous system and it communicates with the brain, so there is no separation, but it's not just something that's happening in the brain. It's not just something that's going to change our thoughts or our emotional processes, that we just need to talk about it or we need to change how we think, and that will change how we respond. It's actually much deeper than that. And as we look at how this trauma response is actually in our physiology — it's not just something that's affecting our brain — then that gives us that insight that if we really want to resolve the trauma that our body is carrying, we're going to need to work with our body and how it's been affecting our biology and how that biology is now keeping our bodies stuck in this trauma response.

Carl Cincinnato (01:00): Can something experienced long ago have lasting effects on our health or even contribute to disease? If so, how do we know, and can we learn to reregulate our body and heal? Dr. Aimie Apigian is a board-certified preventive medicine physician who specializes in trauma, attachment, addictions, and optimizing our nervous system. In this interview, we will shed light on the idea of stored trauma, the nervous system, and trauma's possible link to migraine. Dr. Aimie makes complex science of the nervous system, trauma, and neuroplasticity easy to understand and to apply. Dr. Aimie, welcome to the Migraine World Summit.

Dr. Apigian (01:38): Thank you very much. I feel this is a very important conversation for us to have today.

Carl Cincinnato (01:43): Well, let's start with you. You trained as a general surgeon before changing career paths. What happened?

Dr. Apigian (01:50): I never expected to go into trauma. I never expected to go into addictions at all. And what happened was that during medical school is, just after I finished my master's in biochemistry and I had a few months before I jumped back into the third year of medical school, and I decided to use that time to become a foster parent. And by the time they actually had someone that they wanted to place with me, I was already back in the third year of medical school — internal medicine rotation at that. But when the social worker, Rosa, described Miguel, who was 4 years old at the time, and what he had been through, I said yes. And as Miguel came into my home and my heart, and my life, this became something that no longer was what I was studying in the textbooks. This was my life. This was what I was coming home to every day from the hospital, and it completely shifted my understanding of what is needed to heal trauma.

Dr. Apigian (02:54): I was under this assumption and had been told by the social workers that Miguel was young enough that really all he needed was love, stability, time, and he'd be fine. And that was my hope for him because he had had a rough childhood. He had been placed in the foster care system at age 9 months, and I so wanted him to be able to rise above that. And I just knew that I had so much love for him that it would surpass all of those hardships and pains that he had been through with time and with stability. But actually, what happened was that, with time, he was becoming worse. And by worse, I mean he was acting out in ways that I could tell he was very defensive and was so guarded and what scared him was my love. And so here I was thinking that my love was going to heal him, and it was my love that scared him.

Dr. Apigian (03:53): So you can imagine the conundrum that we got into, and with time, his behaviors continued to escalate, get more dangerous. At one point, he tried to kill me; he would talk about killing me. And so this became very real for me of needing to figure out — well, I



should say I *chose* to figure out; I *chose* to make that commitment to even adopt him and to find what he needed for his healing journey. And it took a long time, but through that process, I started to see the attachment issues that I was learning about in order to help Miguel. But I started to see this in all of my patients, and I would hear it, first of all, in how they would talk. And I was like, this is so similar to some of the patterns that I see in Miguel and then some of their health conditions and diagnoses and what was going on in their life when that triggered.

Dr. Apigian (04:48): And I just started putting things together, and I started to see patterns — and I'm trained to see patterns; that's what they train physicians to do is to see patterns to diagnose, to prescribe. But the patterns that I was seeing were these patterns that related trauma and attachment pain to health conditions, symptoms, diagnoses, and once you see that, you can't unsee it. And that's what prompted me to leave surgery and go into preventive medicine because that's where the adverse childhood experiences (ACEs) studies had originated. And then I started reading Gabor Maté, and he was an addiction medicine physician, and I felt like this is where ... I mean, this is really as close to trauma as you can get in medicine. And so I pursued that path, knowing that what I really wanted to do was to make and bring trauma and attachment into medicine because I saw it as a driver for symptoms that were being missed and not spoken about.

Carl Cincinnato (05:53): So that has brought you into this reexamination of trauma. Let's talk about that for a little bit. What is trauma?

Dr. Apigian (06:01): That's a great question, and I'll tell you what trauma is *not*, first of all, and trauma is not an event. And I know that most people listening to that might just want to stop me right there and be like, "But no, it's a big, bad, horrific event!" And I'm going to tell you, "No, it's actually not the event." Trauma is an experience of the body, and we actually have a trauma physiology in our body. And so, we have a stress physiology and a stress response, but that is not trauma. We then have a trauma response and a trauma physiology. And once we understand that trauma is actually an experience of the body, then we get to ask, well, how is it that the body goes into that trauma physiology, has that experience, and it really comes down to one word. Trauma is an experience of overwhelm — and that's it.

Dr. Apigian (07:01): And so, when we look back at our life or even our day to day, anything that overwhelms us is going to be shifting our body into this trauma response. And our mind can have different ideas of what should be labeled as a trauma. And many times, even I have compared my life, my story, my childhood with someone else and been like, "Who am I to complain? Who am I to say that I had hard experiences when I have Miguel's life to compare to?" And yet, when we look at the body, the body has a different story, and the body's story is really expressed in symptoms (like migraines), and the body can have a story of, "I've been overwhelmed, and I've gotten stuck and overwhelmed." And so trauma is anything that, for any reason, at that time in our life overwhelmed us. And I will tell you right now that most people are still having an experience of overwhelm today — it's not just in their past; it's become a chronic state — and so a chronic response of their body to feel overwhelmed and to have that trauma response happening in their body and they think it's just stress.

Carl Cincinnato (08:20): I was about to ask: How is that different from stress — that overwhelm?

Dr. Apigian (08:24): I love this question because it allows me to go into the biochemistry of it. Now, stress is something that our body will move into action, and so it's actually a high-energy state. And if I were to give you a big rock or a boulder and ask you to hold it above your head



and you're holding it, and as long as you're figuring out how to do that, you're staying responding to that situation. However, the moment that your body decides this rock is too heavy or, "I've been having to hold it up for too long" — those are the two triggers for the trauma response, by the way: too much too fast or too little for too long. And then the body lets the rock overwhelm or crush it. That is no longer stress. That is the trauma response of the body. And so that's the main difference, is the stress response is actually a high-energy state. And when you are taking action for a problem in your life, then that's when that is going to be the stress response and the stress physiology. The trauma response is going to be one where I don't take action; I actually lose my energy and I don't respond. You can call it a freeze response, but it goes into this place where, "My body feels heavy and I'm not able to take the action that I would be taking if I were in the stress physiology."

Carl Cincinnato (09:47): So, you mentioned how this overwhelm is something that we can experience in the past and we can still carry it with us. Does that mean that trauma can be stored in the body?

Dr. Apigian (09:57): That's exactly what that means. And the body — it's almost like it carries a burden if we're not being able to complete the trauma responses that we experience. And so the body can actually get caught in this body-trauma loop, where it literally loops between feeling overwhelmed and then the body comes out of that for a moment; it goes actually back into stress, but then we have no ability to actually respond and complete that stress response. And so we go back into feeling overwhelmed by all the problems in our life and it loops back and forth between stress and overwhelm, and this is how the body stores trauma. And it creates a lot of havoc in our biology. And there are more changes in our biology that happen as a result of the trauma physiology as opposed to the stress physiology. And so when we look at, is the body carrying trauma, is the body storing trauma? This is how and where it does it: It actually does it in the nervous system, and it creates what we would call dysregulation, where we're actually not really much in that "I feel safe and secure and happy. I'm either feeling stressed or I'm feeling overwhelmed." And that is the dysregulation in how the body stores trauma in the nervous system.

Carl Cincinnato (11:19): Is this a common belief by practitioners in other fields, like psychology or psychiatry?

Dr. Apigian (11:26): So, I would say no. What has been the focus of trauma in the past is more the brain and how the brain responds to trauma. And yet, what we're coming to realize is the trauma is a body response. The body has an autonomic nervous system, and it communicates with the brain. So there is no separation, but it's not just something that's happening in the brain. It's not just something that's going to change our thoughts or our emotional processes that we just need to talk about it, or we need to change how we think, and that will change how we respond. It's actually much deeper than that. And as we look at how this trauma response is actually in our physiology — it's not just something that's affecting our brain — that gives us that insight that if we really want to resolve the trauma that our body is carrying, we're going to need to work with our body and how it's been affecting our biology and how that biology is now keeping our body stuck in this trauma response.

Dr. Apigian (12:31): And I really want to paint the picture that stress is not bad. We're actually supposed to experience stress every day. That's why we wake up with high cortisol levels because our body is intended to have experiences where we move into action and we accomplish something great, and we have the energy to do so. And here is the moment where I



call it the "critical line of overwhelm," where the stress that we're faced with, we *perceive* it — and I do use that word intentionally because this is not actually reality; it's based on our perception of our nervous system. And when the nervous system perceives that the danger that we are in is inescapable, and "It's so big, it's a life threat to me," that's when we cross that critical line of overwhelm and our body goes into the trauma response in order to survive. But it is a very different physiology than the physiology of fight or flight, where I'm using energy in order to overcome a challenge in front of me. The trauma response in that physiology shift is going to move into, "I'm now going to conserve my energy."

Carl Cincinnato (13:46): So, these aren't necessarily conscious decisions that we are making that we are going to fight or we're going to freeze. It's sort of subliminal; it's subconscious — that sort of, systems in the body sort of taking over without us necessarily realizing it.

Dr. Apigian (13:59): Yes, and that's what fascinates me because I like to think of myself as a very logical person. I'm a very educated person. I have two master's degrees; I have two board certifications. I would like to think that my brain runs the show — and it doesn't! It does not run the show. There is this whole subconscious, and the subconscious really is this autonomic nervous system that perceives things, and that's its job. Its job is to keep us alive. And it does that by constantly receiving information from our environment that it perceives as: "This is what we need to do right now to survive. This would be the best way for us to adapt right now to survive." We're not talking about adaptations that happen over generations, and epigenetics, so that does happen over time. We're talking about moment-by-moment changes in our physiology: things like changes to our heart rate, changes to our blood pressure, changes to our breath rate, changes to the sodium levels, to the calcium levels.

Dr. Apigian (15:06): These are things that there's no way that you have conscious awareness of, let alone control. And yet, the nervous system is just doing its job. It's like our guardian angel, and it's there to just keep us alive, and we don't even have to think about it. But the danger — I mean, the problem — I don't really consider it a problem because our body is just doing what it's designed to do. But the problem is, is that when our nervous system has been primed to see danger everywhere, and so it's walking through life always perceiving, "I'm in danger, I'm in danger," when there actually is no danger. But it's our perception of danger based on our life experiences or based on our own biology, because we can actually have a biology that's more sensitive, more vulnerable to overwhelm. And when we look at, it's just the perception of our nervous system, then we realize that that's where the work is. Our work as a human being is to change our nervous system's perception of our experience so that we can stay in a place where, even though something feels hard, it doesn't feel like an inescapable life threat.

Carl Cincinnato (16:22): How might trauma affect and be connected to health conditions?

Dr. Apigian (16:25): There are actually so many. And as a physician, this is where I really saw the need to bring in trauma into the medical field because, until we do that, we're just trying to use Band-Aids and manage symptoms without getting to the true root cause, which is the nervous system that puts our body into a certain physiological state. And when the body is in a physiological state of trauma, symptoms, conditions, and diagnoses are the only outcome of that path. There is no other outcome, and that's the design of the body. And so we can use those symptoms to understand that, OK, the body has this pattern in the nervous system, and these symptoms involve a lot of inflammation. Inflammation is a big part of the downstream effects of the trauma physiology. Many people think that that's stress effects, and no, stress actually decreases the inflammation response.



Dr. Apigian (17:30): The trauma physiology is what takes those breaks off, and our immune system just goes crazy. It goes crazy in several ways: It can develop an autoimmune condition; it can develop long-haul syndromes, whether long-haul Lyme [disease], long-haul mold, long-haul viral; it doesn't matter, long-haul syndromes. It does have a dysregulation of the nervous system that's driving those symptoms and actually made that person more susceptible to developing a long-haul syndrome. We also see other adaptations, like metabolic syndrome, where people are overweight, especially around the belly. They have high blood pressure, or at least blood pressure that's getting to that range. They have insulin resistance, meaning their blood sugar levels are a little higher than what is truly healthy. And the insulin that's supposed to push sugar into the cells, it's not ... the signal doesn't work as well. And so there's a lot more insulin in their blood, but it's not actually able to do its job because when it lands on that receptor, it's like the receptor doesn't hear the message. It's called insulin resistance. And so all of these things are actually as a result of the nervous system changes that happen with the body going into that trauma physiology time and time and time again without bringing the parasympathetic state, which will help to reset things and recover.

Carl Cincinnato (18:53): Is there research and evidence that links trauma to the development of some of these conditions, like autoimmune disorders or inflammatory conditions, that may be at the heart of ... may trace back to trauma?

Dr. Apigian (19:09): There's a lot of data, and this for me is both exciting and discouraging that we have all the science. We have all of the science, especially it really started with the adverse childhood experiences relating stress and trauma to autoimmune conditions. That's been a big connection, but also related to almost every other condition. And not only those studies, but we've had so many other studies since then that confirm that connection. So, we know the science; we know the connection — that's the hopeful part. And then the discouraging part for me as a physician is seeing that physicians in general just don't know what to do with that. Even though they understand the connection, they don't know what to do with that. And so it hasn't changed their practice. Even if they know the science, it hasn't changed their practice, and they continue to still manage symptoms rather than learning how to actually regulate the nervous system, which is what we need to do. I really don't want to make the impression that the solution is to "go to therapy," whatever that means, or that people should be told that "it's all in your head." In fact, that's exactly what I'm *not* saying, is that trauma has become our biology. Trauma has become our biology. So it's not just in our head. And in order to really shift that biology, we've got to regulate our nervous system, that has become dysregulated as a result of trauma.

Carl Cincinnato (20:41): So, how do you go about addressing the trauma that's causing these health issues in patients that you see?

Dr. Apigian (20:49): Yes! Somatic work, somatic healing — whatever your terminology is, "somatic" is a Latin word that means the tissues. So we're literally working with the tissues of our body. Now, what does that mean? There's this term that's called the mind-body connection. And while that's important to connect with our body, that's not going to be enough. We actually need to learn how to work with how to *respond* to our body. And so, "somatic exercises" more refers to movements that we can do that actually are working with our nervous system and completing any responses that it feels it has not completed yet. Or following those impulses that say, "I need to move in this direction," or, "I need to do this." And when we do that, what we find is that the body then moves into a spontaneous deep breath. Many people are trying to do breath work for meditation or for trauma work, not realizing that actually you're still trying to



just manage symptoms with that. What we actually need to do is to get the body in a state where it will then naturally take those deep breaths.

Carl Cincinnato (22:04): How is that approach different to traditional ways of dealing with trauma?

Dr. Apigian (22:10): Traditional ways have focused more on changing how we think. For example, it will have us reframe our childhood, look for the good in what happened as an example, or not think about it. And it's still focused very much on the brain and the story. And what we find is that, actually, when we retell a story of overwhelm, the body goes into overwhelm. And it's literally like we're pulling the past into the present moment and retraumatizing our body all over again. Not helpful.

Dr. Apigian (22:53): And the more times that our body goes into a trauma response, it's only reinforcing that response, and it's reinforcing the effects on our biology and our health. And I've actually seen a lot of people who will go into therapy and they'll talk and they'll rehash something and they'll ... whatever they do with their therapist, and then the next day or later that day, they have fatigue, they have a migraine, they have food cravings that are through the roof, and it's the body saying, "Hey, that overwhelmed me, that actually retraumatized me." And what we find is that going into the story or even knowing the story is not important or necessary when we can learn how to work with our nervous system right now. Just right now, with these exercises and creating a felt sense of safety, we don't need the story. And again, we're able to stay out of that retraumatization by focusing on these other modalities that use the body and stay in the present moment rather than going into the past.

Carl Cincinnato (24:06): How do you think trauma is affecting or leading to migraine in people that you've seen in your clinic or the people that you treat?

Dr. Apigian (24:16): Well, what I've seen is that it's the nervous system. And again, it's the state of the nervous system that will drive symptoms. And this is clearly associated with the autoimmunity. And yes, autoimmunity is actually on the rise; multiple sclerosis (MS), the nervous system being attacked by its own antibodies. This is all a nervous system that is out of control, and it creates an immune system that is out of control. And the leading symptom of autoimmunity is fatigue. And so we see all of these things starting to be connected to, "Wait a second, this is a pattern of the nervous system." And when we have been in a chronic stress or trauma state, we develop a magnesium deficiency because of all the energy that we've been trying to use for that stress response, and then going into a state of depletion with the trauma state.

Dr. Apigian (25:14): And with the nervous system, it needs magnesium. And so the more magnesium deficient that we become, the more the nervous system gets dysregulated and the more symptoms that it will produce, whether those symptoms for one person are migraines, for another person, if it's fatigue, for another person, if it's IBS [irritable bowel syndrome]. It's all coming from that same place of, the nervous system doesn't have what it needs to feel safe. And that's our job. And so when we look at how do we make our nervous system feel safe, that will include the magnesium. Because if the nervous system is deficient in magnesium, I don't care how much you talk about the problem and the story, it's still going to be like, "But I don't have enough magnesium. I don't have enough zinc. I don't have enough B6; I don't have enough of these nutrients." And it will perceive that even the smallest of stressors are an inescapable life threat, simply because, "I don't have enough magnesium to mount a stress response and to



solve the problems in my life." And depending on how far you want to take this, the symptoms that develop are ways in which the body's trying to protect us. And for fatigue, you can see how the body's trying to protect us by slowing us down so that we don't exceed our capacity because we're deficient. We're deficient in energy; we're deficient in magnesium, for example. And the migraines can be the same way.

Carl Cincinnato (26:46): One of the things that's been found in research is that people living with migraine often have higher levels or incidents of childhood trauma of some type, whether it's physical, mental, sexual, abuse of some type. On the other hand, people tend to blame our modern lifestyles [and] our diets for the rise of autoimmune disorders and our poor health. Where do you land on these influences? Is our lifestyle and environmental factors playing a role as well? And on our nervous system?

Dr. Apigian (27:20): I do see it as it's all involved — it's yes, and yes. Yes, and yes. And this is actually the work that I've moved into around this concept of the biology of trauma. When we experience trauma, it does change our biology and it makes us more susceptible to diseases. And then, depending on what other exposures we have in our lifetime, will depend on what specific disease I get, whether that's autoimmunity or whether that's cardiovascular disease or a long-haul syndrome.

Dr. Apigian (27:52): But here's the thing: We have that biology, and we can be born with certain biology that actually makes us more susceptible to trauma. And when you look at our diet, our diet is one that will create a biology that tends to create dysregulation in the nervous system. It will create experiences of overwhelm. And so our environment very much contributes to the dysregulation of our nervous system. And our nervous system and experiences, whether they be emotional or social, are also contributing to that dysregulation. And so you literally have all of these things coming together that are creating experiences of overwhelm. And that's how we started this conversation, was realizing that trauma is just an experience of overwhelm. It doesn't matter what caused the overwhelm. It's anything — whether it's our diet, whether it's exposures, whether it's toxins, or it's physical abuse or childhood abuse — anything that, for any reason at that time, created an experience of overwhelm in our autonomic nervous system. And so it all lends together, and I think that's why we're seeing this huge uprise in all of these trauma-related diseases, is because everything is creating an experience of overwhelm in our body.

Carl Cincinnato (29:16): You mentioned that just about all of us have experienced overwhelm at some point in our life. Does that mean that this type of approach would be helpful for just about everyone, as well?

Dr. Apigian (29:28): I do consider that this is the work that every human being has to do. And I think that this is the power that each one of us has to be able to learn how to work with our body, work with our nervous system, and that is the most powerful thing that we can do to create the best life for ourselves.

Carl Cincinnato (29:49): For people who have been watching and want to learn more, where can people learn more about you, your work, and perhaps get started?

Dr. Apigian (29:57): Yes. There's a guide that I've written to help people know how to get started, and it's called "Steps to Identify and Heal Trauma." And so if anything from my talk today has resonated with people, they will want to download that guide. I have it on my



website, traumahealingaccelerated.com. And on my website, they will see that guide, and it has an assessment or a quiz inside that will help them see the other ways to identify stored trauma in the body that we didn't have a chance to talk about today. And then really walking through that trauma response of the body that we also touched on; it goes into more detail. And then: What to do? What is this somatic work? What is the parts work? How do we integrate the biology work that we know that we need to do in order to really, truly help our body move out of what has become a chronic trauma state?

Carl Cincinnato (30:48): Dr. Aimie, thank you so much for joining us today on the Migraine World Summit.

Dr. Apigian (30:52): Thank you so much.