

# **Understanding the Biochemistry of Anxiety**

**Guest: Dr Aimie Apigian** 

Disclaimer: The contents of this interview are for informational purposes only and are not intended to be a substitute for professional medical or psychological advice, diagnosis, or treatment. This interview does not provide medical or psychological advice, diagnosis, or treatment. Always seek the advice of your physician or other qualified health provider with any questions you may have regarding a medical or psychological condition.

### [00:00:09] Meagen Gibson

Hi, and welcome to this interview, I'm Meagen Gibson, your conference co-host. Today, I'm speaking with Dr Aimie Apigian, a double board-certified physician in Preventive and Addiction Medicine with a double master's degree in Biochemistry and Public Health. She's the leading medical expert on how trauma becomes our biology and what to do once it creates a chronic health condition.

Yet her inspiration comes from her personal experience, becoming a foster parent and adopting during medical school, and then experiencing her own health crisis in her 30s. She's been on a journey to find practical tools and solutions beyond diagnoses, pills, and traditional therapies that weren't addressing the root problem.

She now hosts a podcast, a YouTube channel, and online summits working closely with experts in the health and trauma space. She speaks around the world, leads groups through their programs to address stored trauma in the body, and teaches practitioners to do the same in her biology of trauma online training. Dr Aimie Apigian thank you so much for being with us today.

#### **Dr Aimie Apigian**

Thank you, I'm excited for this conversation.

### **Meagen Gibson**

Let's start by getting it out of the way, brain versus biology, is anxiety our thoughts, or is our biology involved?

#### **Dr Aimie Apigian**

What a great question, what a great place to start. Now, you have to understand that with my background, I have a master's in biochemistry. For me, everything comes down to biochemistry.

### [00:01:32] Dr Aimie Apigian

In fact, as I was looking at all of the contributions to the field over the last 10, 20 years, it is quite clear that every thought and every behavior comes down to our biochemistry and proteins. What is the mechanism of proteins at the cellular level, at the system level? So, yes, we can take a thought and break it down into biochemistry from the neurotransmitter that's involved in that thought, down to our mitochondria in our cells.

### Meagen Gibson

I was following you, you said neurochemistry, I was like, okay, great. I feel like our audience is probably familiar with chemicals, everybody's heard about synapses, neurotransmitters, and all the good chemicals in our brain, they fire, and where they come from. Maybe we'll get to that in a minute. But you lost me at protein, tell me what you mean by protein. I'm like, my chicken breast made my anxiety worse. Help me understand.

### **Dr Aimie Apigian**

Yes, what we've been taught so much around everything is DNA, everything is our genetics, and our DNA runs our life, and that is so not true. What runs our life are proteins. It's looking at our DNA, but which proteins are being made from our DNA? That's where epigenetics comes in, and that's where generational trauma comes in because generational trauma is changing our DNA and how it's read.

It doesn't matter what genes we have because they may not even be read. It's when I walk into that library, which book am I pulling out to read and which books stay on the shelf and I never even read them? Our DNA does not influence our life, our thoughts, and our anxiety as much as we have been taught. It comes down to what proteins are being made from our DNA, and what is their role in our mitochondria, in our cells at the system level. We're looking more at protein level than DNA and genetics.

#### Meagen Gibson

Everybody who's of a certain age heard you say mitochondria, I'm like, the powerhouse cell. We all know from elementary school. Our mitochondria have so much to do with our energy, it's the energy cell of the body, and it's fueling. So how are the proteins... Are DNAs deciding what protein it's going to make? And then what is the relationship of that to things like anxiety, our trauma responses, and things like that?

# **Dr Aimie Apigian**

I love breaking down the body's stress and trauma responses. It's not our DNA that decides which DNA gets read, it's our mitochondria. Most people, again, haven't been taught this, this is not what I was taught in medical school, so I always get excited that I get to share with people things that I never even was taught in medical school.

### [00:04:29] Dr Aimie Apigian

Let's take a cell, any cell in our body, it has certain elements. One of those elements is the mitochondria, another element is the nucleus that holds our DNA.

Then it has all these other places in the cell that package proteins and send them where they're supposed to go, whether that's outside the cell, or inside the cell. Surrounding all of this is this cell membrane. The cell membrane is the equivalent to our brain.

The cell membrane is receiving all of this information, just like our brain does, and then it's filtering it and deciding what goes where, what does this mean, and what do I do with this? As we look at the types of stress that we can be under, and I use stress in a very neutral way, whether it's bad, whether it's good, stress is stress to the body. It does not matter whether it's emotional or biochemical.

As we look at the stress response of a cell, as the sense of danger increases, it hunkers down. The cell hunkers down, our mitochondria hunker down. They hunker down in such a way that they are giving us their best. That's what stress is, the stress response is an activation.

If you look at it as the cell metabolism, it's an upregulation of energy production in the mitochondria. But there are so many things that have to go into being able to upregulate our energy. That's where proteins from the mitochondria are being sent to the DNA saying, Help, we're in a time of stress, we've got danger, we've got to rise up to the occasion, and I need those proteins made that will help me rise up to the occasion.

When we see people, or ourselves, having the experience that when a stress comes we're not able to rise up to the occasion, we immediately go into collapse, shut down. What's the point? I know that I can't win this anyway. Well, then that was a signal from our mitochondria and our cells that looked around and said, We don't have the resources to give you anything more, we're already giving you our best.

That's when the strategy of survival changes and we see a very different physiology, biochemistry, that is the trauma response down at the cellular level.

When that switch happens, where now it's not hunkering down, now I'm falling apart. When the mitochondria fall apart, they send other proteins to the DNA that says, Never mind, we don't want to upregulate our energy production right now because we're shutting down.

People in your audience, they're well-educated, they would know that this is the dorsal vagal response. There is a definite change in our proteins at the mitochondrial, at the DNA level, at a cell level, and then that is communicated at the system level.

So now we have our whole diaphragm being affected, we're not taking those deep breaths because we're in dorsal vagal response and we're barely breathing. Our mood just went from anger, which is a normal emotional response to a threat or anxiety, to collapse, defeat, hopelessness. It happens in a moment of time. That's because of the proteins that can so quickly alter their messaging to say, Oh, we got to change our survival strategy here.

### [00:08:28] Dr Aimie Apigian

It's fascinating to be able to see the science of what happens and realize that whatever I'm experiencing and noticing in my body, that there's a biochemical reaction underneath that.

That's my leverage point, so that when I can come in and I can say, All right, mitochondria, how can I support you to be able to hunker down even longer and not fall apart so that when a stress comes, whether that's the death of someone that I love, or exam week, or a new job interview, or a car accident, it doesn't matter? How can I support my mitochondria to be able to go into that stress response and hunker down even longer and have the resources that they need to not fall apart?

#### Meagen Gibson

I think that's such a wonderful way of putting it that makes it not only something that we can understand but also normalizes, this is something that you put some attention to.

I know I've experienced... I had this thing where I started to notice every time I got a serious cold... I had several serious colds in a row that ended up I had asthma, was on breathers, and all this stuff.

But what I noticed that was concerning was that my mental state was so incredibly affected, and I was so hopeless. I was like, This is who I am now, I'm going to have to walk around with this breathing apparatus and tubes up my nose for the rest of my life. I didn't have any valuable thoughts or ideas. I could not complete small, simple tasks. It was just catastrophic thinking, all the things that we associate with anxiety.

Then when I recovered and my brain was back, I was like, Well, that's weird that I would dissociate from my brain, this is happening to my body, or even if I put my nasal passages in, I was still like, but my brain is a separate organism.

But your whole body, your immune system, your stress responses, and your nervous system, they're all so intricately entwined. Something even as simple as a head cold can affect your self-image and your self-talk because of exactly what you described if I'm understanding you correctly.

#### **Dr Aimie Apigian**

Exactly. To be able to see the view, Meagen, that our nervous system is always helping us. It's always doing what it thinks is going to help us the most. When I notice my thoughts go to a hopeless place, now I'm able to say, Okay, I know that I am not going to believe those thoughts because this is just the state of my biochemistry.

What's happening in my physiology right now? What is happening in my body? Oh. And when my body is shutting down, the thoughts are there to help me not exert myself even more. So being able to see these things that I hated, I would get so frustrated at, I would hate my body, and I would hate my brain. The relationship became very much like, I'm going to tell you what to do, and you need to go along. To be able to realize, Oh, these changes are my nervous system's way of helping me, and I never saw it that way.

# [00:11:56] Dr Aimie Apigian

Brain inflammation is one of the most common associated biochemical changes that we experience when we go into an overwhelmed response. That is the word that I interchange with the trauma response, because, again, is a cold trauma? No. But at the same time, did it trigger a response of overwhelm in your cells? Yes, so it still went into that physiology of overwhelm.

This is where we can look at what is happening in my body so that I can support my biology. Knowing that when my cells go into that place, there is brain inflammation that happens. There's that disconnect and dissociation that happens. That's normal. That is always going to happen.

How can I then support my brain inflammation? Just looking at anxiety, glutamate is the most common neurotransmitter that is driving anxiety and driving brain inflammation that's part of anxiety. Glutamate, for me, is one of the important areas to repair. I like to apply a biology of trauma repair tool for glutamate specifically because of its very significant role in that shutdown place where our thoughts go hopeless and anxious.

#### Meagen Gibson

Interesting, I feel like I've seen L-glutamine.

### **Dr Aimie Apigian**

Yes. Glutamine and glutamate are very different.

#### Meagen Gibson

Yeah, I remember just enough about chemistry to know that ine and ate all very different. I want to make sure in case somebody's like, I remember that I've seen that in my supplement.

What are the differences and what are people looking for and how can they get support if they hear you say that? I don't want somebody going out to Whole Foods and they're trying to find something and they're like, Oh, this will solve it. I'd love it if you teased it out a little bit more.

#### **Dr Aimie Apigian**

Yes. Glutamate is a neurotransmitter that is the irritating transmitter in our nervous system. It's the opposite of GABA. For people who are familiar with GABA, this is literally the opposite of GABA, the Balancing Neurotransmitter. We want the balance, we don't want no glutamate because glutamate is what gives us the drive, it's what gives us the focus sometimes, along with acetylcholine. It's not that it's bad, it's just that it can get out of balance, and when it does, then it's associated with the inflammation and the anxiety.

Glutamine is what you're going to take when you have gut inflammation and you're trying to repair your gut. Glutamine is the fuel source for the enterocytes, which line your gut. As you're trying to repair a leaky gut, for example, you want to take glutamine, as well as butyrate, and some of these other things that will help repair your gut, because your gut inflammation will trigger brain inflammation.

# [00:15:01] Dr Aimie Apigian

That's one of the things that I like to share with people is that when you went into that place of hopelessness and despair, it may not have been an emotional cause, it may have been your gut inflammation that triggered your brain inflammation. But because we're not thinking of those things, we always look to our life, and we look at who in my life is causing me stress. Who in my life is doing this to me?

We're not realizing that, Oh, I'm having this reaction to someone in my life, but it's more because of my own brain inflammation, and the decreased capacity and tolerance that it has for stress when it has that inflammation.

Glutamate is something that's very common in those with, I want to say, perfectionism. Glutamate is very common in those with OCD. Glutamate is very common in those with an addiction, substance use, or addictive personality.

Knowing that we have a leverage point there, one of the best repair tools for glutamate is N-acetylcysteine. Interestingly, N-acetylcysteine is associated with our detoxification system, which is our liver, and it cleans things out for us, mostly while we're asleep, which is why quality sleep is one of the most important things that we can do for our mood and mental health. It is the precursor to glutathione. Glutathione is your main detoxification enzyme that goes around and cleans everything up.

But N-Acetylcysteine has been found to not only be acting through glutathione to address the glutamate and the brain inflammation. Brain MRI studies show that independent, by itself, it's going and it's cleaning up debris, it's cleaning up inflammation, it's cleaning up oxidative stress from brain inflammation. Brain inflammation happens when our immune cells in our brain get overwhelmed.

It doesn't matter what cell we're talking about in the body, whether the microglia, which are the brain immune cells, or the liver cells, or our gut cells, or any other cells, they have a certain capacity for stress. And when a stress comes, they're upregulating their energy through our mitochondria and the changes in the proteins that that signals, but it can only respond based on its current capacity.

If we have things that are draining our energy, like inflammation, toxins, oxidative stress, we're going to have a decreased capacity to respond because we need energy to respond. But also if we have nutritional deficiencies, magnesium is one of the most common nutritional deficiencies in the Western world, and we need magnesium for literally every single reaction in our body.

If unknowingly we have a magnesium deficiency, and then we come across some stress, then our cells, our mitochondria, are looking around being like, I'd love to help you out, I'd love to be able to respond, but I don't have enough magnesium, so instead of being able to respond and rise to the occasion, I'm going to need to shut down. And then that's when we feel all of that shutting down, we start to feel heavy, we can start to feel the brain fatigue, and fog and decision fatigue, all of those things that are associated with our whole body shutting down in that dorsal vagal response.

### [00:18:43] Meagen Gibson

So interesting, I want to ask one more note about magnesium because this can also trip people up, too. They're like, Okay, I'm going to go get some magnesium, and then they get stomach problems and issues because they're not taking the kind that you had necessarily intended to recommend. I would like you to give us the once over on the different types of magnesium supplements and how they might each benefit.

### **Dr Aimie Apigian**

Absolutely, and there are different types of magnesium and they do different things. There is a large, big picture view of magnesium. In general, you're going to want to go with a chelated form of magnesium. Chelated ends in ate, just like glutamate. Magnesium malate, magnesium threonate, magnesium glycinate. Any of those magnesiums that end in ate is a chelated form, and those are the ones that you're going to take when you want them to be absorbed and used by your cells.

Some of them have different mechanisms per se, but at the end of the day, as long as you're taking a chelated form, you're going to be nourishing your body with magnesium.

Things like magnesium oxide are used for constipation because they're not well absorbed in the gut, so they stay in the gut and act as a laxative. That's why those citrate... Citrate does end in ate, so it's a chelated form, but still, magnesium citrate and magnesium oxide are the forms that are most used for constipation. Which if you are constipated, please, please do something about that because that will be driving anxiety and overwhelm. The other forms of magnesium, the magnesium threonate, is the best one to target the nervous system and things like brain inflammation.

What I do is I take a variety of chelated magnesium every day so that I'm getting magnesium threonate for my nervous system, specifically. Then I'm getting magnesium glycinate and malate and these other forms that are more directly involved in my muscles, and my mitochondria, and my energy production.

We can also use magnesium for going to sleep at night because it helps relax our muscles. There are different ways to take magnesium. But at the end of the day, what I would want people to know is that if you're taking more than what your body needs, then you get diarrhea. That's one way in which you can titrate that dose yourself and be fairly confident that as long as I'm not having gut issues, as long as I'm not having diarrhea, the current dose that I'm taking is fine for my body.

#### Meagen Gibson

This is why I asked, I don't need the customer service emails from people, I started taking magnesium and I had to call off two days of work.

#### **Dr Aimie Apigian**

I want to share something though about that, Meagen, because it's been fascinating for me coming from my background as a physician, where I was trained to look for the right medication and the right pill for a specific diagnosis.

#### [00:21:55] Dr Aimie Apigian

Then I'm coming into this space where I'm trying to optimize and help people create a biology of safety. As I start people on that journey, I'm starting them with building a foundation of regulation. I started in surgery training, so I'm coming at it from the lens of, I first need to stabilize you before I do surgery on you. We're not going to dive into your trauma yet, we're not going to dive into those stories yet, I've got to stabilize you first before we do surgery and open you up.

What I have started to do is test people that are coming in to build those skills with their foundation, and already start them on magnesium. The difference has been significant, Meagen. The ones who start taking magnesium from the very beginning before we even do lab testing and look into all this biology stuff that I'm known for, just starting magnesium as we start to do somatic work and parts work, and create those experiences of safety, they're experiencing more shifts, more changes in their nervous system in just 21 days than those people who are not taking magnesium.

For me, this is exciting to be able to see the leverage points that we have in our biology and the importance of bringing in the biology piece no matter what type of therapy or modality that a person is doing.

### Meagen Gibson

Yeah, it's such an interesting point that you make about getting people, you didn't necessarily say the easiest, that's my word, but what's the most immediate way where we can shore somebody up and give them more resources biologically?

# Meagen Gibson

Because it's like if somebody twists their ankle, you give them ice and crutches, you don't say, Well, first, let's go run a mile while you tell me breathlessly how you hurt your ankle. We need to get them a little bit of healing, a little bit of nutrition, some support, and some repair in getting that going to give them the capacity to even then talk about, or think about running a mile.

### **Dr Aimie Apigian**

100% I've got to help them have the capacity, just like you said. And the capacity goes down to the cellular level every single time.

### Meagen Gibson

Since we're talking about chemicals so much, you talked about stress earlier, and you were talking about this can be emotional, it can be physical, it can be biochemical, all of those count as stress.

And cortisol, our stress hormone, gets such a bad rap, but I always like to tell people we have cortisol for a purpose, just like you were saying earlier. It's like, if you have a lower capacity, your thoughts are anxious and riddled with catastrophic thinking, there's a purpose to that. Your body is trying to say, Chill the heck out, go lay down, stop taking things on, and have some boundaries, it's perfectly acceptable for you to have limitations at this time. It's trying to get your attention.

### [00:25:00] Meagen Gibson

Just like cortisol... One of the most fascinating things I learned about cortisol when we did the Hormone Super Conference was that it helps you wake up in the morning, it's the "stress" hormone, but without it, you wouldn't wake up, so let's not give it all a bad rap. Cortisol has a huge function in your life, and you need it for some things. How can we tell when it's gotten off-kilter, when we've got too much cortisol coursing through our bodies? And then how do we correct for that?

#### **Dr Aimie Apigian**

Meagen, I think I'm going to say something really controversial. Cortisol is not the stress hormone.

### Meagen Gibson

I love that, say more.

#### **Dr Aimie Apigian**

We have been putting our focus on the wrong hormone. Cortisol is not the problem at all, in fact, cortisol is the hormone that protects us from the stress hormone. When people are measuring high cortisol, they have naturally assumed that, Oh, then that means that cortisol is the stress hormone, and it's the one causing the problem, and that is not true at all.

Cortisol is responding to the stress hormone so that the higher the cortisol, the higher we can know, Oh, we have higher levels of the real stress hormone, which is adrenaline. Adrenaline is the real stress hormone, cortisol is not.

When I look at adrenaline, adrenaline is the one that releases cortisol. If there's no adrenaline, then we don't have any cortisol. Cortisol is just doing what it's told to do. If we want to change our cortisol levels, we need to focus on adrenaline, not cortisol.

Cortisol is part of the upregulation response, adrenaline is what gives the message to upregulate. There's a cousin to adrenaline, it's called noradrenaline. Adrenaline is also epinephrine. But those two are very quick to respond to any sense of threat or danger. It is the hormone that activates us into the sympathetic state.

When we're there, that's when we need an upregulation of our energy, even if it's a good stress, like running a marathon, I still need higher levels of adrenaline because that's what gives me more energy. Cortisol comes in to protect my body from adrenaline, we see this throughout the brain, we see this throughout the body, that cortisol is coming in to buffer the effects of adrenaline. Adrenaline, if not buffered, would cause significant brain inflammation. Cortisol comes in, cortisol is the protector, it's like the mother hen that comes in and says, It's okay, it's going to be okay, I know that there's all this adrenaline, but it's okay, you don't need to get scared.

Same thing with our bodies, cortisol does not cause inflammation, cortisol decreases inflammation. When we look at, well then what's causing all the problems? It's the undischarged adrenaline that is running through our system and we're not knowing how to complete our stress responses, or our trauma responses, which ends up producing even more adrenaline.

### [00:28:24] Dr Aimie Apigian

We produce adrenaline just walking around at our baseline because we never know what's going to happen next in our day. We're waiting for the next shoe to drop, and that's adrenaline, that's not cortisol, that's adrenaline that is then needing cortisol to come in and buffer the damaging effects of adrenaline.

We see this, especially with one of the most common biochemical imbalances that I see in those with anxiety, which is copper excess. Copper excess by itself creates more adrenaline. So for no reason at all, you're going to be sitting there and you're going to be feeling so anxious not knowing that it's copper excess, but the adrenaline is there.

The copper excess, because of its effects on adrenaline, is more commonly associated with things like chronic fatigue and fibromyalgia, because the adrenaline just sits there. We don't usually move enough in our Western world now to be discharging all of this adrenaline, because that's how we discharge adrenaline, is through movement, actually moving our muscles.

It sits there in our tissues and starts to eat up our tissues. So the next time that someone gets a test back and says, Oh, my goodness, your cortisol is high, we've got a problem here. Actually, the problem is the adrenaline behind the cortisol. The cortisol is there to help buffer the adrenaline, but the adrenaline should be the focus, and how can we bring that down so then we don't need the high cortisol?

### Meagen Gibson

Well, and that begs the question, too, then, other than the copper excess, which you talked about, that is one of the keys to the adrenaline. How else can we stop releasing so much adrenaline all day long?

### **Dr Aimie Apigian**

There are emotional reasons, there are psychological reasons, and then there are other biology factors. One of the other biology factors that will be producing adrenaline is if we are fasting or low on sugar. As our sugar levels drop, that's when adrenaline gets released, because, again, that is our body's way of increasing our energy and releasing more sugar to go to cells to make more energy.

Anytime that our body senses, Oh, we have a danger here, our sugar levels are dropping too low, we're going to have adrenaline. This is why some people, especially if they have what I would call a stronger pull to the freeze response, maybe they're waking up and overwhelmed, what they reach for, they reach for caffeine first thing in the day. Caffeine generates more adrenaline, and they are drinking that caffeine on an empty stomach, which gives even more of a kick with adrenaline.

Then they're probably having some sugar or some other dietary factor that makes their blood sugar levels go up and down all day long. That is a stress to the body that will increase our adrenaline levels as our body is trying to regulate our blood sugar levels.

### [00:31:29] Dr Aimie Apigian

We can have all of this happening underneath the surface and have no idea then that what I call our stress reserves are being drained throughout the day because it's being used up in responding to our blood sugar levels. It's being used up in responding to this, responding to that. So then when the real stress hits when something does happen, our tank is already empty, our cells and our mitochondria go to hunker down to give us more, and there's nothing more to give us, and that's when we just go into overwhelm.

### Meagen Gibson

Absolutely. Gosh, you described somebody I know so well, and it's not me, a friend of mine.

### **Dr Aimie Apigian**

Asking for a friend.

#### Meagen Gibson

All of us know at least one person who has to apologize for the way they act when they're hungry all the time, and that person in my life is also an adrenaline junkie, which is the colloquialism, right? They're constantly trying to chase excitement and stimulus, and they're also less than kind when hungry. Blood sugar balancing and paying attention to balanced proteins and fats and nutritional needs have been key to that emotional regulation.

### **Dr Aimie Apigian**

Yeah. I think one of the most helpful things that a person could do to reduce their anxiety throughout the day is to eat more protein and fat earlier in the day. Just that, Meagen, just that would make a big difference.

# Meagen Gibson

I'm going to clip this and just passive-aggressively send it to this person later... No.

What are the different assessments that somebody should know and start to engage with if they want to explore this work and the biological factors that might be keeping them stuck in anxiety and preventing their healing?

### **Dr Aimie Apigian**

Where I start people, for the biology piece, is looking at some of the most common factors that will drive anxiety. I have a guide on my website on the three most common biochemical imbalances. That's where I would start a lot of people, for those coming to me for biology trauma health coaching, that's where I often start them because they are so common and we won't be able to make much progress as long as we have these biochemical imbalances that are driving our nervous system. They're creating dysregulation. That is a commonplace that I start.

### [00:34:11] Dr Aimie Apigian

Then once we identify those, some of them, two of them are more quick wins, especially the one that has zinc deficiency. zinc deficiency is another very common imbalance, our body responds so quickly when we give it zinc. I would want to know that because zinc is a very protecting, soothing balm for our nervous system. When we are deficient in zinc, our nervous system feels like it's on edge, everything seems to bother us, lights, noises, our sensory system is on edge. Yet when we are resourced with zinc, we can be in the same environment, around the same people, and they don't bother us.

Those are the quick wins that I like to be able to give people to take the edge off of all of the things in our lives that stress us out and can push us into overwhelm. Those three most common biochemical imbalances are a commonplace that I start.

For those in the United States, it's the easiest ones to test. It's harder for those in other places in the world, which is why I have that guide on my website because it goes through the most common traits of each one of those, so that if testing is not available, then you can still look at those traits. If most of them are ones that you relate to, there's a good enough chance, and it's safe enough to start the nutritional repair tools for those.

#### Meagen Gibson

I'm so glad that you mentioned that. This is why I love doing this conference because I can remember at the beginning of my anxiety journey, nobody would listen to or validate my experience that... I was like it hurts to be touched, and I had little kids, and all they want to do is hang all over you like leeches. I love them, but it hurt physically to be touched, and I couldn't understand it. It was total nervous system overwhelmed, all of my nerve endings were fried, and something that simple could have made such a large difference.

That's why I'm so glad that we talk about this stuff, because something that simple can get people that 10% more capacity to hold the people you love on a daily basis. This is what's at stake, this is what we're trying to get people... But it's not like, of course, we want to help people repair rumination, obsessive thoughts, and all of the compulsive thinking about the future and worry, all of those things we also want to tamp down. But the point is that you're more connected to yourself, more connected to the people in your life, and the work that you love.

#### **Dr Aimie Apigian**

Yeah, exactly, and knowing that there is a biochemistry beneath some of the obsessive thoughts. When we notice that we can't let a story go, or that we're playing a conversation with someone in our head for the 10th time and they're not even in the room. These are things that are like, Oh, that's right there's biochemistry behind this, this is not me, this is not my personality, this is not my authentic self, this is my biochemistry right now and I have repair tools, I can take in N-Acetylcysteine, reduce that glutamate, and there go the obsessive thoughts, there go the OCD types of things, there goes the perfectionism.

It's wonderful, it gives me so much hope to know that behind every thought, behind every feeling, behind every behavior of mine, there's a biochemistry. I can do so much to change my life, to become more of who I want to be, by applying repair tools to my biochemistry.

# [00:38:02] Meagen Gibson

Yeah, and then if there's still work to be done because trauma does exist.

### **Dr Aimie Apigian**

Now I have the capacity.

### Meagen Gibson

Yeah, exactly. Tell me a little bit about that as well, because I'm sure that once you get people resourced, once you get them the capacity, then sometimes there's further work to be done.

You're like, okay now that we have wheels on the car we can teach you how to drive before we were driving around on rims with sparks flying out the back, but now that we've got great tires, this car is sound, now let's talk to you about how to drive.

#### **Dr Aimie Apigian**

Absolutely, when we look at it through that lens, trauma work is a stress on the body. If we don't have the capacity for stress, we are going to be more prone to be overwhelmed by the trauma work that we're doing, rather than be able to grow from it.

I feel like my job with bringing in the biology piece is to allow someone to change their biochemistry enough that when they go into the trauma therapy, when they go into that session when they do that personal development work, they're going to be able to grow from that and change their neural pathways because their biology is set up for that.

When our nervous system is surrounded and bathed in inflammation, guess what you're not going to be able to change your neural pathways. You're not going to be able to change your reaction to that person, or your reaction to your mother, or your sibling. I don't care what it is because your brain is not set up, and does not have the current capacity to do any positive neuroplasticity.

My job is to make your body and your biology available, give it the capacity to go in and do the work that will allow the rewiring, the reprogramming, all of these things that do need to happen in order for us to have a completely different pattern of living life and responding to situations.

But until we do that, Meagen, we're going to be fighting our biology, which means white-knuckling it, which means analyzing everything that we do and being like, Okay, is this a healthy thing to do, or is this the unhealthy thing to do?

#### **Dr Aimie Apigian**

Because it hasn't become a new way of being yet, it hasn't become our new default habit of responding to life. We're still going to have that default, we're going to still be trying to then white knuckle to do something different, rather than being able to have our brain and our body help us create a whole new pathway to connection, a whole new pathway to authenticity, a whole new pathway to loving myself, and caring for myself. Rather than still having those there and trying to override it with my logic, which we all know at the end of the day is not going to work.

# [00:40:56] Meagen Gibson

Absolutely, I think it's so validating for people to hear that if meditation, gratitude journaling, and yoga, and... I'm trying to think of all the other things that I tried right before I knew I had anxiety to create calm and regulation in your life isn't working. It's not because you're bad at them, there could be that biochemical element that's going to give you the capacity.

There are so many amazing, scientifically proven tools that will help you with your trauma and your anxiety, but not if you don't have the physical capacity to withhold the discomfort without it creating a storm of stress and furthering your symptoms. If I'm hearing it, you, right?

### **Dr Aimie Apigian**

It's like someone in a wheelchair and asking them to run a race, they don't have the capacity. They would like to, they would love to, and they're jealous of those who are, but it doesn't matter how hard they try, the reality is they're in a wheelchair. Bringing in the biology piece allows someone to be able to get out of the wheelchair, walk, then run, and then race.

Then, like you're saying, who knows what they get to do? Who knows all the layers? I don't know, but I do know that they're going to now have the capacity to go through those layers and every year become a better version of themselves rather than a more shut down, or further from themselves, as they age.

### Meagen Gibson

Absolutely, I can tell you from experience that the people in my life who are at the retirement age and have done this work in their middle-age years are happier, healthier, and more content than the people who skipped it, didn't think it was important. And then they get to retirement age, and all of a sudden, they're stressed, miserable, and anxious, and it doesn't feel at all like they thought their life would at that point. The only difference between them is the work they did in this type of capacity in those middle-aged years.

#### **Dr Aimie Apigian**

Yeah, you know what we go through in life, Meagen, it doesn't go away. Even as we look at the biology and the trauma biology, it accumulates over time. It's not that we experienced something, we experienced overwhelm, then it stayed at that level, and it still stays with us. No, if that's when it happened, we haven't done any repair tools and worked with our biology, then been able to do the deeper work, it's grown over time.

### **Dr Aimie Apigian**

Someone two or three decades later, imagine what started out as something small, now is a lot and a large burden for their body. The oxidative stress, the damage that that does to our DNA and our mitochondria. These things are accumulating under the surface if we aren't actively addressing it with the repair tools.

### [00:44:05] Meagen Gibson

Well, you've given us a lot to think about, and I have a feeling that people are going to want to get in touch with you after they see this talk. How can they do that?

### **Dr Aimie Apigian**

They can find me over at the <u>biologyoftrauma.com</u>. I have a podcast on all of this, the biochemistry of trauma that they can find over there. I have the resources, I mentioned the guide of the three biochemical imbalances. So that is where they can find all of those resources, <u>biologyoftrauma.com</u>.

### **Meagen Gibson**

Fantastic, Dr Aimie thanks again for being with us today.

### **Dr Aimie Apigian**

Thank you so much, Meagen.