



Conscious Life presents

ANXIETY SUPER CONFERENCE

Brain science, gut health and psychedelics

Guest: Dr Maya Shetreat

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[00:00:09] Meagen Gibson

Welcome to this interview. I'm Meagen Gibson, co-host of the Anxiety Super Conference.

Today I'm speaking with Dr Maya Shetreat, a neurologist, herbalist, urban farmer, and the author of *The Dirt Cure*.

Dr Maya is the founder of the Terrain Institute, where she teaches earth-based programs for transformational healing, including professional training programs for psychedelic assisted approaches.

She works and studies with Indigenous communities and healers from around the world and is a lifelong student of ethnobotany, plant healing, and the sacred.

Dr Maya, thank you so much for being with us today.

Dr Maya Shetreat

Thank you so much for having me.

Meagen Gibson

So I'd love it if you could begin by telling everybody a little bit about the story of your unconventional path in your career. You're a pediatric neurologist and you're also a herbalist and have extensively studied the gut and its impact on our health. So how did you get here and what have you learned about anxiety along the way?

Dr Maya Shetreat

Well, I think that in our society we are expected to follow a certain kind of path or fit in a box. And I was never really that kind of person. So no matter how hard I try to fit into a box, I've always had to incorporate other things. And I don't always know how they're always going to come together, but they always seem to.

I think I'll just incorporate how it has to do with anxiety as I go. I think that there is a way in which trusting that process has become a real practice. So I could easily have gotten, and I have gotten very disrupted by, where am I going? What's coming next? How does this have to do with it? I thought I was all of those things that we do to ourselves.

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And I think having some faith, seeing how things have synchronicities and the way that things come together unexpectedly but beautifully, is an important thing to go back to for me. Once I know that happens, I can go back to that again and again and move through the 'what ifs' that come up? Like, what if it doesn't work out? What if I want...? What if I end up...? And just having that sense of faith.

But in terms of how did I do all these things? So I really started out, not even necessarily wanting to go into medicine way back when, but I saw this great special, a Bill Moyers special actually, a million years ago, on healing and the mind. And I was probably in high school or College, and they were talking about this young girl who had lupus and she couldn't take her meds because they were causing her to go into renal failure. But when she stopped them, her lupus would flare. And so it was sort of a lose-lose.

And I'm a big believer in how to create wins-wins. And so I heard this story of, they basically started to give her castor oil at every administration of her meds. And the team said this is a new way of doing medicine and gave her the castor oil, stopped giving her the meds eventually, but continued to give her the castor oil on the same schedule. And her body responded as though she was getting the meds but with no renal failure because she wasn't getting the meds. So she was having no side effects.

And they said, oh, this is psychoneuroimmunology. And it's this new field of medicine. And I was like, great, that's what I want to do. Psychoneuroimmunology. I'm going to go to Med school. I wrote an essay about it. They let me in even though I was an English major, basically writing about alternative medicine.

And I went through medical school and training, and during that time got married and had babies and was in this world of having brainwashing happen. There is a way that you have to see the world in conventional medicine.

And ultimately, right as I was part way through my fellowship in adult and pediatric neurology, my youngest child, my son, got sick. And that took me on a whole journey into mold and food and allergies. And it ended up being the basis for my work and my book, *The Dirt Cure*.

And I remember saying to somebody who had known me a long time, I said, you know, I think I'm interested in integrative medicine. And she was like, I thought that's why you went to Med school in the beginning.

But it's like a decade later, all these things have happened and suddenly there I was ready to explore really different things.

And that has been an incredible process of seeing how people can heal, not through conventional medicine and where the deficits are, which I think we all know and can talk about, but where things like diet come into that, where things like experiences in nature come into that. How our experience with sunlight and music and creativity have to do with that. What really nourishes us.

And ultimately it took me even more deeply into studying my own Indigenous lineage, learning with Indigenous elders, working with, not just plant medicines, but both together and separately, ritual, ceremony, and the sacred.

[00:05:58]

So it's been a really cool journey, and the journey continues always. And there are a million directions we can go in terms of how to apply this to anxiety. So I'll let you choose the way.

Meagen Gibson

Fantastic. I love it. Give me the responsibility.

I relate to that so much. I did not go to any sort of medical school, but I wanted to be a meteorologist. And here I am, not anywhere near meteorology. So we all take different paths to where we end up, don't we?

I want to go back into it through history and start with the brain science of it, because I've also heard you mention my favorite subject that I'm not smart enough to talk about, which is microglia.

And I don't know if you're familiar with Donna Jackson Nakazawa book, I think it's called, *The Angel and the Assassin*, where she talks about microglia through the whole book and the immunology of the brain.

I don't want to get too far into the weeds for people, and they're like, whoa, too much science, but in talking about anxiety and immuno responses and the way inflammation can occur in the body from, mainly a brain perspective to start, I would love if you could give us the layman's, elementary explanation of how that system is all, how it works itself out.

Dr Maya Shetreat

So first of all, when I was in my training, we were taught the brain is in this inner sanctum that's not connected to anything else in the body. So anything going on in the rest of the body, there's this blood-brain barrier that creates this protection zone for the brain.

And while that's not false, it turns out actually that's also not true. And so there's really no way to just talk about the brain part of it. But what you're talking about is microglia. So we think of brain cells as being neurons.

If you think, well, something is going on in my brain cells, you're going to think neurons. And that's what we always thought were the cells in the brain. And we didn't think that the brain actually even had immune cells.

But it turns out that there are these other cells called microglia, and they are nurse cells to the neurons. They are in a 3:1 ratio with neurons, meaning there are many more microglia than there are neurons. So there are really important populating cells in the brain as well.

And the way that they're nurse cells is partly through things like being immune cells, being part of the immune system, but they also do a lot of other things. They nourish and support the neurons.

And so part of their job as being nurse cells is that when they get activated in some way, immunologically, and that can happen from anywhere in the body, not just in the nervous system.

[00:08:47] Meagen Gibson

You wouldn't have to have a brain infection for your microglia to get all in action.

Dr Maya Shetreat

So, for example, you could have something going on in your gut, like you ate something that your body doesn't like. And there's a whole immune system in your gut, which we could get into and I talk about my book, *The Dirt Cure* quite a bit, and those immune cells in the gut release these chemicals. So there's a lot of ways that they communicate with the brain, but this one way is a major way.

They release these chemicals called cytokines. And the cytokines, and there are many kinds of cytokines, but these cytokines are the way immune cells communicate with one another. The way neurons communicate through neurotransmitters, immune cells communicate through cytokines.

And so those cytokines actually go all over the body from the gut. They cross the blood-brain barrier with no trouble at all, and they actually can activate the microglia.

So the microglia are activated now because they're like, oh, there could be danger. I'm hearing through these chemicals, there could be danger. And they activate, and they become Mama bear, is how I kind of think of it.

So they go from nurse cells doing the yummy things nourishing and siphoning good things to the neuron and plasticity and all this good stuff, to basically lobbing grenades.

And that's okay for a short period of time, but we have to understand that when that's happening, A) sometimes there's actually no real danger in the brain. So there's just an attack happening or a defense happening, but there's really no attack. That's one possibility.

Another thing that can be happening, too, is that neurons can get caught up in the crossfire. They're not getting the same kind of nourishing yummy stuff from their nurse cells that they're usually getting. Instead, they can get sometimes lobbed by the grenades or even just the fallout.

So neurons start operating very differently in an environment where there's this Mama bear kind of grenade throwing mode because they're activated.

So you'll see in the scientific literature a lot of data about activated microglia. And every neurologic condition that you can think of, from autism to OCD to anxiety to Parkinson's and Alzheimer's, just everything across the board, has a component of chronically activated microglia that are part of that process.

And so neurons are actually often not the primary instigators of the problem. They're often secondary or just fallout issues because microglia are, in many ways, running the show.

Meagen Gibson

So more of a response to inflammation and emergency elsewhere in the system, not the cause of the emergency in the first place. If I'm hearing you right.

[00:11:46] Dr Maya Shetreat

Very often. And that has to do with everything else that's happening in your body and in your life is impacting your nervous system. And we can think, oh, this problem is originating in my brain, but in fact, it's probably very rarely the case that that's true.

So as a neurologist, people would say, oh, you asked me about my poop, you asked me about my food. I'm a pediatric neurologist, so I do adults and kids.

Meagen Gibson

Say poop a lot in your practice.

Dr Maya Shetreat

It's easier and more fun.

But, all of these different things or how do you sleep? Or what do you do for fun? What's going on in your home or in your family? They're like, but wait, you're supposed to be talking about my brain. Everything that is around you and within you is informing what's happening in your brain.

So it's a big conversation, and in a way, it makes it, I guess, a little harder or bigger. But it also makes it more interesting and more exciting because there's so many ways in, to transforming some of these issues that we face neurologically. It's not just like, oh my God, it's a brain thing.

Meagen Gibson

And it does two things at once for me when we start to think of it in this much larger way, is that, as you already said, the medical community before, we used to separate everything from the chin up. Like our teeth have a separate doctor, eyes have a separate doctor, our brain can't cross the blood barrier. We know a lot of that's not true anymore, but we also separate our thoughts from everything else that's happening.

So when speaking about anxiety, we think of it just as a thought pattern. I just need to fix my thoughts, and that's my anxiety. That's the problem. It's the focus of my thoughts. So it's a thought problem.

When there's a whole sophisticated system that involves your gut and your diet and your nutrition and the food you eat and the stress you're under and the sleep you get, that's all impacting the entire cycle of the system and will also impact your thoughts as well. And your thoughts can have an impact on how your gut is functioning.

And so for me, it both takes away my direct control responsibility. I surrender, I'm like, a lot of this is out of my control. I cannot physically control my microglia, no matter how much I try. But I do have a lot of things that are in my control.

And so I would love it if you could shift into the conversation more of what you were talking about, about poop and diet and supplements and things like that that are in your control and how they actually impact that sophisticated system of nervous system health and functioning.

[00:14:37] Dr Maya Shetreat

So I'm not going to get too much in detail about mitochondria, because I know that's another... I personally can nerd out about this, as you might imagine, for a long time. But the interesting thing is that our thoughts, which we think are ours and that we create and are related to the me of the whole scenario, we're really not a me, we're a we. And that's something we're understanding more and more.

So we have, in our cells, every cell basically in the body has mitochondria. And these mitochondria actually evolved. I think by now it's a pretty well accepted theory that they evolved, actually, from bacteria.

And part of how we know this is that we have bacteria that live in our gut and on our body called our microbiome, about 3-5lb of organisms, microscopic organisms. Hopefully that doesn't make people feel stressed out. But this is actually really important, as you'll see, for our health and well being.

And those microbes that live in and on our body are in constant communication with our mitochondria and actually determine the health of ourselves through conversation.

And so what I want to say about that is, it's really important to think of ourselves as always being in conversation through our food, through our experiences in nature, through the microbes we were exposed to, through, maybe, the toxins we were exposed to, through the kind of people we were around. All of those things actually very much inform the health of ourselves.

And I'll give you an example of people. We can talk about this from a lot of different angles, but if you're in a group setting with people, you're actually exchanging microbes. That is a good thing, generally, believe it or not. I know that doesn't sound like a good thing.

Meagen Gibson

Especially after last year.

Dr Maya Shetreat

But in fact, we were making a lot of progress on that topic until the last couple of years happened. But actually, there's a lot of data that the more diverse the organisms in your microbiome in and on your body, the healthier you'll be.

Why? Because the more organisms, the less likely one category of organism is going to grow out of control and take over, cause an infection or cause trouble.

Meagen Gibson

There's a diversity balance that works itself out and nobody gets to dominate.

Dr Maya Shetreat

Yes, exactly. So you want to have that diversity.

And every time you're in an environment with other people or pets or, I live in New York City, but I keep chickens so I have a garden, and all of those things, the people, the pets, the nature, the

whatever it is, is actually contributing and shifting your microbiome and diversifying, hopefully, your microbiome so that you're never the same person that you were when you come out of a meeting of any kind, of a conversation as you were when you went in. That's good. That's a good thing.

[00:18:07]

And so those organisms in your body, when they're diverse and you're feeding them well, meaning you're eating diverse foods. Not always the same or not, let's say, a lot of processed foods, because that really feeds only certain categories of organisms and so the other ones die off because they need to be fed well. It's really clear that the more diverse your diet, the more diverse the organisms in your gut and in your body.

And again, that actually informs things like cravings, it informs things like anxiety, it informs things like sleep, like cognitive development and intelligence and memory and executive function and all the things that we think of as up here in the control center. But actually, a lot of it comes from all the other places. So that's really important.

And what I really encourage, because people say, well, what diet do you think is the best diet? So in my book, in *The Dirt Cure* I actually go through a lot of foods. Not every chapter is on food but a lot of it talks about those categories because actually there are some people who do very well on certain diets and some people don't.

For example, I see people who eat Paleo type diets, which is very little to no grains and only carbs that are very whole food carbs. And they're eating grass-fed, meat and nuts and berries and that style of food.

For some people, that is way too much of a certain component called oxalates, which you find in bone broth and you find in certain berries and in nuts and in many dark leafy greens and dark chocolate. All the things that people in the Paleo world are eating a lot of. That actually can drive anxiety, pain syndromes, inflammation, all kinds of things.

And when I have to talk to people about this, if we're doing an analysis of their diet, what's going on, it's so upsetting to them, "But I eat healthy". So it's really so important to explore how you're feeling with the food that you're eating, because it's always nice to have a really easy answer and say, yeah, you just have to stop eating grains or only eat meat or only eat vegetables.

But in fact, this is, again, all about that conversation between you and your food in this case, and your microbiome and what foods at particular times in your life. You might have been vegan for many years, but now you're not feeling well or you're feeling really anxious. Sometimes I've had to tell people I think you should eat meat, and it's transformed their lives and their nervous systems.

And I will say their anxiety, wow, so profoundly to be on a more meat heavy diet, and people are angry when you say this, maybe people who are listening to this.

Meagen Gibson

Yeah, we might hear those emails, but I totally hear what you're saying.

And also to just stay in communication with your body. I mean, just as the two of us talking, women, our bodies change, our hormones change, what they're designed for changes through time. You've

just got to stay along for the ride. And the same thing happens to men, just in different ways. And so your nutritional needs also are going to change in the way that you need to support your body.

[00:21:49]

I can speak to exactly what you're saying in that a year ago, working with a fantastic nutritionist, we decided to try to eliminate nightshades from my diet because I was in a tremendous amount of pain and inflammation. I could not figure out why. I was eating well. Eating a fantastic diet, what anyone would say was a fantastic diet.

She was like, let's try this. And I am pain free. I've been pain free for about 8 months, and my anxiety has gone down because my inflammation has gone down. I didn't have probes on me to measure all of that. I can only anecdotally say that, but I've felt it. I've experienced it.

It's a huge pain in the butt. I love tomatoes and peppers and eggplant, they are some of my favorite things to eat. I just can't. It's not worth the pain and the repercussions on both, what I have to do to medicate pain or just treat it, and then also my elevated levels of anxiety because my inflammation was so high. So is that along the lines of the kind of thing you're talking about?

Dr Maya Shetreat

Yes. And tuning in because it might have been that peppers and tomatoes and all of those things might have been at a certain point in your life, completely fine and no problem with it. So it really is about being along for the ride and being curious about what you're experiencing. And I think that is a big component.

I am someone who could easily get into a place of anxiety. I love when things go as I expect, in a certain sense. And yet in my trainings that I do, in my certification programs, we have a whole module on surrender. What is surrender and how does it feel and why is it important? I do a whole exploration of curiosity and beginner's minds.

And these are things that can initially be triggering if you have gotten attached to a very particular way of doing things or you want to map out your life, but life doesn't always work like that. So it's really about developing the tools for what you will do when you're in the unknown.

And we are always going to be encountering. I mean, we just did for a couple of years, and we still are in our own way. We're navigating the unknown. And what it really comes down to is coming with that sense of new eyes, that sense of curiosity. Whether it's our bodies, whether it's our society, whatever it is, and just being willing to be a little playful with it and say, what would happen if I stopped doing this or I started doing that? I'm going to play. I'm just going to experiment a little bit.

And the stakes for that can be very high, but you can also make them low by being in that place of curiosity. And then there can be fun and learning and actually neuroplasticity, when our brains change and the way we operate changes, hopefully for the better, because we're coming with that sense of play.

Meagen Gibson

We also do a trauma conference, and I've found in speaking with some of the psychedelic medicine, plant medicine researchers for that conference, one of the things that I kept hearing was that sometimes, and especially in people with trauma, which is different than being traumatized, that

psychedelics and plant medicine can help take those emergency systems offline and reestablish the access to safety play, things like that.

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And so I'd love it if you could speak to that part of your experience. How you've seen plant medicine or psychedelic assisted approaches help in establishing that curiosity, that surrender, that open mindedness when these shifts need to happen.

Dr Maya Shetreat

Well, everything that we know about psychedelic neuroscience, any researcher will say, this is what we think we know. We'll say that because we're, I think probably at the tip of the iceberg. But what we think we know is that there's this network in the brain called the default mode network, and it's really the me network. And it acts in a suppressive way of shutting off old memories, maybe traumatic memories, emotions, etc.

And one of the things it helps with, among many things, is something called predictive coding. Predictive coding is actually, so we think in every new situation that we're in, that we're seeing everything about that new situation. And in fact, that's not how our brains work at all. And the default mode network in certain ways facilitates that.

What happens in a new situation is you pick out a few details, and your brain fills in all the rest of the details based on old experiences that have happened before.

Now, this is a fantastic survival mechanism because if there's a tiger about to pounce on you, you don't want to have to be like, oh, there's teeth.

Meagen Gibson

Assembling information anew.

Dr Maya Shetreat

So, great for survival, maybe not so great when you're not in survival mode because you're going in, and maybe you had difficult experiences in the past, and now every experience you're seeing through the lens of what's the danger here? When maybe there actually isn't really a danger there. And you don't feel safe, when actually you could and should feel safe.

So one of the benefits, one of the many benefits of psychedelic assisted therapy, which can be macro dosing, which we think of as the journey, the trip, that sort of thing. Or micro dosing, which I coach a lot of people through those experiences where you actually don't have that altered experience, but you have over a period of time, plasticity and shifts, maybe in similar ways, where you actually can see things not through that lens of the old stories.

The default mode network can shift or go offline, certainly in macro dosing, where you have this opportunity. And it doesn't always feel great, I want to say. For all these suppressed things, these old memories, maybe traumas, maybe just emotions that you've repressed come back online.

So the default mode network is offline. These emotions are suddenly online, and you experience certain things that you're not usually paying attention to and by doing so, can actually allow you to be

in conversation with them. Back to that idea of being in conversation, these things that you've otherwise repressed.

[00:29:09]

Again, you can't be in that all the time because that can make it very hard to operate. But you do want to be in it sometimes, or at least for some limited period so that you can say, oh, you know what? That's old. That's not new. I don't need to feel this way about this anymore. I have a new understanding.

So one of the things that's happening is that, another thing is parts of the brain that don't normally communicate on psychedelics or in plant medicines, do communicate. So there's new networks that are formed, and that is plasticity of the brain. Your brain changes.

And what we know after these experiences, particularly if people have more mystical experiences, but not only, is that all of these, there are a lot of connections that now happen that allow people to become more open minded.

So people actually might feel more empathy where before they didn't. They might feel more caring. Actually it's less likely if you've, let's say, taking psilocybin, according to studies, that you would abuse other people, that you would actually commit a petty crime, even. In other words, you're a better citizen, potentially, after having these experiences.

Now, I do want to just, as a caveat, because people will say, well, everyone should do this and we should do it, and the world will be so good. Many of our leaders have done it. Many billionaires have done it. Many people in Silicon Valley do it. This is not, it's not a guarantee. It's a portal, it's a window.

And that is why I love doing the coaching around it, or the integration afterwards, because it's about finding the meaning and doing whatever work and play you may need to move through and make meaning of the experience and learn how to apply it in your everyday life.

It's not just, this is like a pill that's going to do it for you. So I do want to just say that as a caveat, because it sure does sound good and it can be really wonderful and transformative, but it isn't just the experience itself that necessarily does that. It's everything that happens before, during, after and ongoing.

But absolutely, there's beautiful data for anxiety, OCD, major depression, addiction, and I mean like very severe addiction, even, not just like, I don't know if we can call addiction, more minor but let's just say the full spectrum can be addressed. Eating disorders, I mean, the gamut. And of course, things like, also dementia are being looked at now, and cluster headaches and migraine headaches.

So there's a lot of really beautiful data. It remains to be seen as, decriminalization happens or legality, how people will access it and so on and so forth, but it's exciting.

It's an exciting time because it's a whole medicine, category of medicine with a capital M, not the kind that we throw around in hospitals, that's been around, actually, probably since the beginning of time. There are temple drawings from forever, basically since the beginning of time that are the cannabis, the mushrooms, the different things.

And I teach about this. I have courses on this where I really go into the history as well.

[00:32:50] Meagen Gibson

There's two things that you did that I'm so glad you responsibly set the container for psychedelic medicine and said, I know I'm making it sound like everyone should just put it in the water supply, but it's not the magic answer, unfortunately. Because what happens is each individual is going to have their own experience.

And like you said, with all of the container and the responsibility of it and integration, etc, because what you don't have, which Indigenous people and people for thousands of years have had it when they were using it, is all of the ritual and all of the context around it that have been developed for thousands of years.

So a totally separate process through a different lens and through a different modality and delivery method, but still with a container in mind and a process and an integration and digestion, if you will, in mind and the medical community of it, and research, which is fantastic.

And also the sensitivity of Indigenous communities who have been using these plant medicines since the beginning of time, and holding both of those complexities. How do we support science and support people and give them tools to help them and also not take away tools from Indigenous people that have had them for thousands and thousands of years?

Dr Maya Shetreat

Absolutely. All of that is.... And understanding what appropriation is. And there's a lot of, you brought up ritual and ceremony, and there's a lot of creating of ritual and ceremony or recreating or desire to create in Western society, where people think they want that sacred environment.

And there can be that, and there can also be pseudo sacred environments where things are not so above board and things are not actually as authentic as we might think or as ethical. And that can happen wherever you are in the world. It can happen actually when we know that a lot of people are doing, let's say, plant medicine tourism or that kind of thing. You could go to a place that you think is really authentic and things are not done responsibly or the way it would have been done.

So, I've been working, not just with plant medicine, but outside of plant medicine. My work has been around the sacred and how to incorporate ritual and ceremony with no need to be altered. We can actually experience that sense of the divine without needing to be altered.

And that in and of itself is a medicine. It is an experience where we can learn about ourselves, where we can go offline, have that default mode network off. We know that that happens in other scenarios, for example, deep meditation, and I mean deep regular meditation, not like every once in a while. Sensory deprivation, fasting, experiences of great awe, near death experiences, which hopefully we don't have, but all of these other opportunities do take the default mode network offline.

And I think a really deep ritual and ceremony can do that. I see it all the time because I facilitate that. Even online, where we have, I offer free ceremonies where we have a thousand people from all over the world, and people leave and feel transformed. And I think that can happen in your own community with a full moon ceremony or whatever.

And even though those things have become marginalized types of things, there is the possibility of having really authentic beautiful experiences that can do some of the same healing grounding, transformative, connected experiences that I think many of us are looking for.

[00:37:05] Meagen Gibson

Absolutely. Well, I'm definitely interested in what you teach, your courses, all of your offerings. So tell everybody how they can find out more about you and what you offer.

Dr Maya Shetreat

Well, the best place to go is just at drmaya.com and all of my Terrain Institute offerings are there, so my psychedelics deep dive which is the science, the sacred practice, micro dosing, and all of the questions.

There's also herbalism courses I do. If people sign up for my email list they're invited to my free ceremonies that I offer every month. I have a certification where we learn basically all about ritual ceremony, surrender, what it means to be a sensitive person and the gifts of that, which is something I'm very passionate about, sort of my baby.

And then ways to work with me one-on-one, whether it's micro dosing coaching or spiritual coaching or the physical, emotional, spiritual. So all of that is on my website.

Meagen Gibson

Fantastic. Dr Maya, thank you so much for being with us today.

Dr Maya Shetreat

It was such a pleasure. Thank you for having me.