Integrative Medicine For Depression And Anxiety Transcript

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Introduction and guest welcome

Well hello everybody. Here we are again talking about solutions for depression and anxiety, the things that we have the power to do in our everyday lives to improve our mood, to reduce our worry.

And we have a wonderful physician, a good friend, a mentor. Mark Pettis, you just heard about what a wonderful perspective he's going to bring to us. Doctor Pettis, thank you for joining us on the Depression and Anxiety Solutions Summit.

How are you doing, Mark? I am doing great through. It's great to see you. It's great to be with you and those who are listening and participating in the summit. Thank you for the invite.

Everybody. Listen. If you're watching Mark and I have, you know, a nice feeling between us because we go way back. Mark was really one of my mentors, one of those docs who took me under his wing.

Really early in nutritional psychiatry. I mean, I was just kind of at a residency. Just thinking about my first book was do I think it was a mood and food?

Workshop for Paula, which maybe a lot of people listening know. Wonderful retreat center of where you are in the Berkshires of Massachusetts. Yes. And so, Mark, you have been involved both, really on the frontier of thinking, around things like integrative health and functional medicine, but also you have been part of a really large health care system there in the Berkshires as a conventionally trained physician, can you just tell us a little bit about your background and kind of respect to right now on, and really kind of focused on depression and anxiety?

My background is in nephrology through, you know, kidney specialty hypertension, pretty complex metabolic, challenges. And, I did what nephrologist did for many, many years.

I trained at Mass General Hospital in Boston. I had a very steep academic, pedigree, if you will, and really loved biology and so, so many people with kidney diseases.

Mark Pettis' medical background and shift to integrative care

Suffer due to ultimately preventable health issues like diabetes and high blood pressure and, many of them also confront concurrent mental health diagnoses.

So, so many people that I've treated through the years have had challenging major depression and anxiety. And so I, it was a journey that brought me deep into the lives of others. And, it was probably, 12 years or so after I started practicing here in the Berkshires in western Massachusetts in 1988, that I, I had this epiphany that, so much of what I was attempting to manage, you know, putting out fires, in retrospect, have more evidence and science to support a more thoughtful preventive strategy.

And when I, I had to sort of peel myself off of this, vortex that I was in a vortex that I was thriving in, to to begin to examine, and to learn many of the things that I was never taught in medical school.

So, you know, nutrition as a second language and, learning more about the neuroscience and mind body science, learning more about environmental toxins, circadian by all of these remarkable dimensions of life that is there to, you know, it's sort of an interesting thing, but hadn't really gotten deep into the science, which was not central to the paradigm that that I was sort of taught under.

And so I pivoted. Can you take us just right back there? Because if everybody listening, watching, just make sure you're on the same page, nephrologists or for sure the nerds of medicine.

I mean, no offense, Mark, but they kind of were doing calculations no one else is doing. The kidney is so incredibly complex. It's kind of an inside joke in medicine work, when you took the shift, you're talking about 12 years in and you started to look at the science.

You know, it's called a lot of things. Integrative medicine, functional medicine. But looking at things like circadian rhythms, nutrition and prevention, did you go into a little bit of, I guess, the bias of conventional medicine and, and, and what did you see in the science room press?

Were you concerned? I very much had a bias. And that bias was was very much, oriented toward disease diagnosis and, and management. And I was pretty good at that.

And many kidney and metabolic diseases can be quite complex. So I was often the one called in to try to sort out some of the most complex issues. And on any given day that were happening in our health system, I think as I, as I began to really explore the science in more detail, what each of which was really accelerating.

Drew, I think we've been in the midst of this knowledge explosion. You know, around this time the internet was just coming into mainstream medical thinking.

So I had a pre-Internet educational and practice experience. And then as, as information technology and this knowledge explosion took off. I found myself craving I could not get enough of of reviewing the research that was out there, learning as much as I could in real time.

And I think that disease sort of centric, bias that I had quickly began to dissolve. I could I could appreciate fully that there was a role for it and an importance of it.

But I really began to appreciate that for the geek, and I. And I really am a geek. No offense taken. True. Like I said, I think I said nerd. I mean, and, you know.

Unfortunately, as you said, I think it's a geek. Was was really the science was as good as any science I had ever, you know, come across and, and, and all of these new concepts, epigenetics.

The microbiome, opened up an entirely different sort of paradigm. And, and so I did have to unlearn many things. I think part of this growth and evolution requires unlearning.

So much of what we learn turns out not to be entirely true. And, and so it was a humbling experience for me. You, you, you just anticipate that you're going to be doing something for your entire life until you just decide that it's time to move on.

So all of these, these crossroads I found myself at were unanticipated and yet very exciting and exhilarating. And I found my passion, which was starting to, you know, kind of plateau, really reignited.

Metabolic health markers linked to depression and anxiety

And I and I think it just kind of brought me into the rabbit hole, if you will. And there's been no turning back. And that was, you know, that was probably 25 years ago.

Thank you for that, Marco. I wanted to get into some of that science and some of what impresses you as a clinician and as someone who's run a large health care system or helped in that process, or what specifically for patients with depression and anxiety?

What is the connection between metabolic health and what are some of the markers of metabolic health we should be paying attention to? What are the connections between those and these symptoms of depression and anxiety?

So many people are struggling with? It's such an important question in 2020 for true, metabolic health. For those who may not be entirely familiar with that, that that framework really looks at a constellation of biomarkers,

biomarkers that are epidemic in our in our population and kids, young adults and adults throughout the age continuum are dealing with metabolic health challenges.

Simply defined, it would be, an abnormal weight, particularly with more weight around the midsection. We often refer to, the waist to hip ratio. So those that have a bit of a larger girth around the waist, as they do in the hip, will tend to have more fat around the midsection.

That is known to be a, a phenotype. That correlates very strongly with, with, poor metabolic health. Then there are the things that we measure, like blood pressure, so high blood pressure, a high blood glucose, a fasting blood sugar that's elevated, and in this example, elevation would be 100 or greater.

Would be considered prediabetes or diabetes. Central to, disrupted metabolic health. And then in the lipids, which, you know, many people, you know, hear about lipids, all the time.

Poor metabolic health focuses less on total cholesterol and LDL cholesterol and more on the triglyceride level and the HDL, what we have historically called good cholesterol.

So high triglyceride, low HDL, that's a ratio that for most I like to see less than two. Anything greater than that would be part of this metabolic syndrome or metabolic health disruption.

I believe what we're seeing in this explosion of research true around around integrative medicine or lifestyle or functional medicine, whatever one might call it, is that people with major depression, people, dealing with generalized anxiety disorders.

And one might extend that. I know that's not the scope of the summit. But if you look at bipolar disease, if you look at TSD, and if you look at other brain issues, Alzheimer's, cognitive decline, you see these common upstream imbalances that take the form of these metabolic disruptors.

So these metabolic disruptors seem to be strongly, strongly associated with depression, with anxiety, with other mind and mood challenges which have become so, so prevalent, today.

And, and what we know about lifestyle and environment is that one can very much modify, prevent and in many instances reverse these metabolic predictors or driver.

So that's the beauty. We can identify them. We can measure them. We can also modify them. And then this conversation drew we're talking about non pharmacologic modification.

There are many good medications that that a physician can prescribe. But it should at a minimum be associated with a lifestyle medicine plan roadmap. In an effort to either limit the amount of time a person may need that medication or to perhaps, result in a lower dose that they would have required to maintain the health that they desire.

So it's a very powerful, science that leverages self care from the perspective of what I think is more important stewardship than ever. As it relates to health and wellness.

Yeah, it's really interesting mix up right now with, the GOP one medications of people, you know, losing a lot of weight, losing a lot of that visceral adiposity, that central, fat tissue, adipose tissue that's very metabolically active.

This isn't to shame anyone in body type, but for to speak about what can be done to kind of manage that, especially if you are really struggling with depression and anxiety, is, you know, are there set of interventions that especially with the kind of speed which some of these work can really shift metabolism?

I just wanted to quickly remove doctor Pettis review. A few of these metrics is I kind of feel part of being, in the summit right here with this at this moment is just checking this box that everybody had their lipid panel in the last year.

Has everyone had their blood pressure checked in the last year, last six months maybe. Has everybody had, fasting blood glucose? Or if you're having challenges with your blood sugar, have you been a little bit more vigilant with that because so many people are struggling or right on the edge of diabetes type two even really healthy folks, you know, if you're working out a lot but still maybe have a genetic disposition or are struggling with some aspects of the moderate American diet.

I think I've been really clear on the summit. I have a problem with ice cream. Sometimes I don't even have it in the house. Right? No more trying to do a better job.

But yeah, I can relate to that. Yeah, but to really, check some of these boxes in the sense of making sure that some of those basics are taken care of, we never want somebody struggling with depression and anxiety who hasn't had, for example, their thyroid.

Basic thyroid, stimulating home hormone check, good screening test, or if something's a little fishy, they're getting a more thorough thyroid panel. Are there some other basics of metabolism?

As someone really steeped in medicine, and I'm curious about some of the newer maybe metrics or places where you see an intersection that is a conventionally trained doctor.

You feel their labs in the integrative world like, yeah, these innovators, they're they're seeing something, you know, should I get an appropriate label?

I mean, what what other things should we be getting that are basic? Yeah, it's a really great question. And you touched on some really important do not misses.

True. From from thyroid to, you know, measures of lipids. Those that are on my sort of do not miss list in 2024 understanding these are rapidly moving targets.

And that's the beauty of science, at least. Ideally, it's one that should adapt and flex to new information in terms of, of, metabolic health in general.

One of my favorite tests that I think today is still rarely ordered by physicians is called a home. I r homma dash I r, which is a blood test for insulin resistance.

So we talked about a fasting glucose or a hemoglobin A1. C really good tests. They're complementary. But the homa I r in addition to sugar looks at how much insulin you have to produce to to maintain your current state of health.

Additional lab tests and actionable biomarkers

And for many, that might be the first sign of poor metabolic health. So the homa I r is a is a very good test. Measures of inflammation, inflammation being a if you will, a disruption in the immune system's ability to self regulate most people with inflammation and their immune systems are tilted more toward overreaction than, sort of laying low.

But a highly sensitive C-reactive protein, at least as of 2024, continues to be one of the one of the best measures of inflammation in the lipid world.

I think there's no question the research is suggesting that we need to be thinking beyond LDL and total cholesterol. So to that extent, I think one of the best predictors is apob.

Apob is a blood test. These are all simple blood tests. And, rarely am not. Am I looking at an insurer that won't cover it? So most of the time these will be covered.

It will be as a marker of LDL that has smaller particles. LDL is as many different things. And so apob sort of

narrows down this family of LDL to those that are most Afro genic.

And typically I will get an apo B with apo a one. And that is a sort of associated with larger, more friendly and protective lipids. And so a low apo B to apo A1 ratio is probably the state of the art lipid test for predicting cardiovascular risk.

It's just. Wonderful doctor pedis. Really appreciate that. And anybody who's, you know, worried scribbling this down for us further will have all these details in the show notes.

And one of the reasons to speak with doctor pedis for me is really both to understand what am I missing? Because, I'm a physician. I've never had a couple of these tests.

And so there's some new, set of basic metrics, let's call it for you can really assess your metabolic health. I think sometimes for me, I'm a little scared, Mark.

Like my HDL has always been high. My triglycerides have always been low. And I almost, like, don't want to rock the boat a little bit. And I think that's just maybe being irresponsible.

And maybe like a lot of people watching, this talk as well was just a little encouragement that, hey, you know, we all we all need to maybe uplevel and, get a little bit more information and all that information is going to do is help us.

Because if there is concerning data at all, it allows us really to plan an effective intervention, utilizing real expertise of individuals like Doctor Perez.

So, I really appreciate, some of that. Are there other. So, sounds like, looking at our fasting, insulin response is something that's really, a new set of metrics.

It's easy to get apob. You said, I think one a, really, something to speak with your clinician about now, are there some other test market sort of essence intersection?

There's a, you know, a lot of laboratory testing in the integrative and functional medicine movements. A lot of patients have questions about that. Yeah.

You know, some people have a lot of criticisms and concerns about that. Certainly some costs involved. But are there ones that pass your test like yeah, that's one good test.

That's a great question because it is a it is a wild frontier of testing. And, not all of it is reimbursed. A lot of it may be interesting but has not yet been subjected to clinical trials.

But I think those that have passed the test, in my opinion, drew, I would include, things like a homocysteine. This is also a blood test that, I think while historically we used to use it to check in people who are at risk of gout, homocysteine and uric acid are blood tests that seem to very strongly, fluctuate with insulin resistance, with poor metabolic health.

So a high homocysteine and a high uric acid are additional pieces of of of information that point to opportunities for lifestyle and environmental changes to, to to focus on metabolic health.

So I think those are two really good biomarkers that that have gained a lot of traction. Yeah. Tell us about uric acid. That's a new and I know, Doctor David Perlmutter had that group.

But drop acid which is provocative in the era of psychedelics. But he's talking about dropping uric acid and uric acid. And I have done a lot of this of ever thought about what is your gas?

Yeah. You're right. Acid is a byproduct of metabolism. Of nucleotides. Our DNA is made of these nucleotides. It's like it's like the poop from nucleotide cyclin.

We choose them up and spit them out like it becomes uric acid. Exactly. So, yeah, everything is turning over the human body. And uric acid is sort of a metabolic byproduct of that turnover.

Now, now things that, can cause a high uric acid, will tend to fall into the category of high glycemic, carbohydrates. These tend to be things like sugar, flour based products.

As that metabolism breaks down, you'll tend to see, more, fructose from sugar. Often fructose in, many and many processed foods, that is ultimately converted to, uric acid. And, uric acid levels can fluctuate greatly in response to modification of diet.

That real is in some of those some of those food sources. It also tends to be higher in people that eat, often things like beer, you know, things made of hops and, and some of those, you know, yeast has has more DNA in it.

And so, as that gets processed, fermented, metabolized, that can cause uric acid to go up some. So alcohol for some particularly particularly beer can be a source of high uric acid.

Vitamin D, circadian rhythms, and light exposure

And all of these things again are known to be associated with alteration of mood and anxiety states. So, I think it's an important and an inexpensive and easy biomarker to follow.

Okay. Well. When I, when I drew excuse me, is the, this is a genetic test, and I don't recommend genetic tests routinely, but the MT h f are the methylene tetrahedra.

Folic acid reductase gene. This is a blood test. And the importance of this in people with major depression is that, you know, a fair number of Americans will have an alteration of the gene.

These are major mutations. They're very subtle alterations that, in this example, will interfere with the body's ability to make folate a B vitamin B9, and it in a way that the body can use it.

We know the brain and the body has a very high folate need. It plays many important metabolic roles. So people with this might have or may not make enough folate.

The implication for the for the individual and for the for the prescriber, for provider is that they may need very high levels of folate to have the bioavailability, that they will otherwise benefit from.

And most of that research has been in major depression. And clearly there are some people with major depression who will be less response to traditional treatments that if they have this MT, HF snipped, as we call it, single nucleotide polymorphism will benefit from the much high folate replacement.

So I love it because it's actionable. There's something one can do with it. And and I think I think the research thus far would suggest that to be, an important, biomarker to be aware of, at least in the example of major depression.

Well, thank you for all those s. I think that gives everybody, you know, a little bit of a checklist with your next primary care visit. As I said, if you don't have a primary care visit, their annual visit to get some bloods, to get a checkup, to talk about any concerns that you have with your mental health and make sure that there isn't something really reversible underneath it that you could do something about.

We didn't also mention like a vitamin B12 level. I guess we would both definitely throw on that list. Feature vitamin D we didn't talk about true events.

Another interesting, evolving story, but one that I think it's a. Lot I think about. If I hadn't been dealing like MT too, in the sense that the data is kind of all over the place a little bit, it's but vitamin D supplementation and folate supplementation for someone who's been struggling chronically with depression or anxiety or wants to try that approach because they're really reasonable place to, you know, to spend a little bit time, energy and, and an

approach that for some patients does, work.

And so I think it's one of those areas or it's an area that's, that's, a little hard sometimes for patients to navigate because, you know, the wellness world and conventional medicine are spending a lot of time debating the evidence on understandably, there's evidence on both sides.

You know, certainly we've all heard the story of patients who are homozygous or empty EGFR who never, ever had a supplementation. They do very well. So, Yeah, they point to and, and I think that I love the way that you frame it.

Even with a scientific body of research that that may be mixed, somewhat conflicting. At the end of the day, these are pretty innocuous interventions, as we currently understand.

The vitamin D story. I know our time is limited. True. But, you know, you touched briefly on circadian rhythms and I and this is an area of research that I'm particularly interested in, and I don't think it has quite hit the functional medicine, integrative medicine radar, you know, in a way that it it deserves.

And it's the story of our light environments. You know, over 90% of our time now is spent indoors under non-native artificial lighting. We spend very little time outdoors.

And when you look at the extent to which light and the quality of light and the timing of that exposure is probably one of the most central environmental stimuli for our circadian day night rhythms.

And when you look to the extent to which disrupted circadian biology is so strongly associated with depression and anxiety and many other chronic complex health issues, it's begging for, in my view, a public health sort of roadmap where how can I reintroduce that which nature has been, gifting me, you know, for and my and the generations before me for the last couple hundred thousand years.

So vitamin D is a byproduct of sunlight exposure. There's some reason for that. Nature does nothing by accident. And so, vitamin D is an important biomarker, I think for some not all.

And I do think when I see low levels, it reminds me of the importance of getting people out into the sunshine at strategic times of the day where they're not going to burn, you know, they they don't require long exposures, but we, I think junk light, much like junk food we all now recognize as an important disrupter of mental health.

Junk light will, I believe, be as potent a driver. And as we learn more about it, I think there are many things that people can do to recreate a healthier, light circadian environment in their in their lives.

Sorry to digress, but. No, no Mark, I love you digressing because it kind of allows, this mental fitness framework I talk a lot about and healing the modern brain talk a lot about kind of lights and screen.

And the disruption of circadian rhythm is one of those parts of the modern world that we have to actively be fighting against. We actually have to be talking about it and thinking about it because it's like junk food.

It's delicious, it's omnipresent. And I love the idea of junk light. I also everyone I really like this point the doctor pedis made and just wanted just, unpack it a bit, thinking about vitamin D levels and vitamin D supplementation just in terms of, okay, you know, if you have depression, does extra vitamin D prevent depression?

Not really. In a lot of the big trials. But if you then keep kind of peeling back the layers, say, well, what does this mean? This means that someone is maybe not going outside at all.

I mean, someone maybe is living a more sedentary lifestyle. It means more questions about that kind of reveal. Some, some factors. Not for everyone, but for a lot of people that really do get involved very rapidly in depression and anxiety symptoms and outcomes.

If you're living inside your isolate ID, you're not connecting, you're not getting natural light. And we can shift that for

for anyone. Some reasonable percentage of people are going to have more good feelings, more good moods, more appropriate sleep, less worry, because those are really active in some ways treatments for these symptoms.

And so when you get a blood level that's off, what doctor pedis is really reminding us just to understand what's going on. Now, that word root cause gets used a lot.

And let's understand what's going on. Terms of, the the the cause, something like low, very low vitamin D and and then in addition to supplementation, what can be done with that?

Really great points through. And for those who are interested, doctor Michael Holick at, Boston University is really, in my view, one of the nation's, leading edge researchers and, and, and vitamin D and, it's clear that vitamin D, to some extent may be a surrogate for lifestyle, as you point out.

True. And so whether whether whether there's a direct cause and effect between vitamin D and mental health, while that may still be speculative, nobody would question that.

Now, if you look at those that live in Ecuador environments, most will have vitamin D's in the 40 to 50 range and do tend to have very low prevalence of mental health.

They're getting their vitamin D from sunlight. And so there probably is a surrogate for many other lifestyle attributes. As you point out. Well thank you so much, Doctor Pettus everyone.

Doctor Mark Pettus, it's been great to be with you. Please, check out the show notes.

Hope, stewardship, and closing remarks

We went through a lot of details, but some real, actionable items that we now have a hope. Have a request. I want to say an expectation, but I want you to hear our encouragement.

Take care of your metabolic health. It's a part of this. It's a part of the struggle with understanding and managing symptoms of depression and anxiety.

And that's one where we have the great news in this, I think, really exciting news that sometimes gets missed. But we understand more about this. We have more we can do than ever before.

So thank you so much to us. I can't wait to see you again soon. My pleasure. So this is a story of hope and I am very grateful for your work in the world, your your stewardship.

And people need to know that you know they are who they are and that is enough. Most of us, I think, need help. Perhaps, reconnecting with what in modern life can feel very elusive.

And and very, you know, the almost impossible. And our conversation, I hope, will inspire people to realize that that's not the true nature of who we are.

And and you're a great light in disseminating that message. Doctor Drew, so thank you for that. Well, thank you so much for that. Mark. It's great to reconnect with you and the Scripture wisdom with this group.

Everybody take this and do what I was asked to do. Something great for your mental health with it. We'll see you in the next Solutions Summit interview.

Take care. Peace.