

Serotonin and anxiety: tryptophan, 5-HTP, serotonin syndrome and medication tapers

- What is the serotonin hypothesis and serotonin syndrome
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Trudy Scott: Welcome to season four of *The Anxiety Summit*. I am your host, Trudy Scott, food mood expert, certified nutritionist, and author of *The Antianxiety Food Solution*. Today our topic “Serotonin and Anxiety: Tryptophan, 5-HTP, Serotonin Syndrome and Medication Tapers.” And we have Dr. Peter Bongiorno here again. You may recall our great interview we had on season three of *The Anxiety Summit* where we talked about “Serotonin and Anxiety, Happiness, Digestion and Our Hormones.” So this is taking serotonin to the next level and you could consider it part two of our serotonin discussion. We had such a great interview the last season I really wanted to invite Dr. Bongiorno back so we could continue the discussion. He is one of my favorite presenters and very knowledgeable in this area. Welcome Dr. Bongiorno.

Peter Bongiorno: Thank you Trudy. It’s so great to be here and thank you for everything you’re doing to spread the word of natural medicine and

natural health. So many more people than would otherwise I think hear it. And I know you're helping so many people. So thank you.

Trudy Scott: Well thank you for the work that you do. And I'm just so glad that we finally actually got to meet in person. We'd been corresponding and talking via social media and on the phone and via interviews. This year in February we got to meet in New York City and I heard you present at the Integrative Healthcare Conference which was really, really fantastic. So it was great to meet you and your wife. It was fabulous.

Peter Bongiorno: Yes and we got to hug.

Trudy Scott: Excellent. We need to bring that up later in the conversation because you shared some really good information about hugging. Why don't we talk about it now because it's just so great. It'll really set the tone for the interview. So share what we talked about when it comes to hugging.

Peter Bongiorno: Well as I talked about at that presentation when I speak sometimes to medical doctors in medical schools and we talk about the naturopathic approach to healing mental health part of teaching physicians is teaching them how to interact with patients which includes hugging your patient. Asking if it's okay to hug and actually giving a hug. Because a therapeutic relationship between a patient and a practitioner is so, so important to the healing process. I mean that's been shown through so much research. And I think in our culture it's almost a little bit taboo to kind of touch each other. And of course it needs to be done in the proper way and ask permission. But I really think it's an important part of my practice because it allows my patients to know that I care and that I'm with them on this journey. And hugging is a way to do that.

A lot of times when I talk to physicians about that in conventional medical schools it's very much a big surprise and you could tell people are very uncomfortable with that. So instead of talking about research and molecules and things like that we spend a good part of the discussion at the end when they're asking questions about how to approach that hugging situation and how to overcome it. And I do believe a few hugs every day does make people healthier.

Trudy Scott: Excellent. I love it. Yes and we got to hug and I think it's wonderful. Touch is so important and hugs can just make you feel so good. So what a great start to our interview.

So for folks who may not be familiar with you I'm just going to read your bio here. And you are a prolific author so I'll read some of the

great books that you have authored and a great book that you've contributed to, a few that you've contributed to. So let me read the bio and then we'll go right into this topic of serotonin and anxiety.

Peter Bongiorno, ND, LAc, is co-director of InnerSource Natural Health and Acupuncture with two thriving practices in New York specializing in emotional and mental health. Dr. Bongiorno researched at the NIH National Institute of Mental Health in the department of clinical neuroendocrinology and Yale's department of pharmacology before training at Bastyr University in naturopathic medicine and acupuncture. He is president of the New York Association of Naturopathic Physicians and major contributor to the *Textbook of Natural Medicine* in 2010. He authored *Healing Depression*, the first comprehensive textbook designed to teach physicians the signs and art of natural medicine for mood support. His first public book in 2010 was *How Come They're Happy and I'm Not* which he followed in March 2015 with *The Professional Guide: Holistic Solutions for Anxiety and Depression*. His latest work is *Put Anxiety Behind You: The Complete Drug-Free Program* which has helped thousands heal their fear. He has also contributed a chapter to *Integrative Therapies for Depression* which was edited by James Greenblatt and Kelly Brogan, both doctors and integrative psychiatrists. He can be reached through DrPeterBongiorno.com and InnerSourceHealth.com.

And I must say your books are fantastic and this new textbook *Integrative Therapies for Depression* is a really fabulous textbook and your contribution on depression is great, as expected.

Peter Bongiorno: Thank you so much. Well every time I work on something new it's such a great learning process and it just helps me bring even more to the table in working with patients. So it's enjoyable.

Trudy Scott: Good. So let's get into our topic on serotonin and anxiety. We're going to talk about tryptophan, 5-HTP, serotonin syndrome, medication tapers and a few other nutrients and herbs that you have been using in our practice that I thought would be interesting to share. Before we get into that let's just start first with a discussion about the serotonin hypothesis. I've had a number of people contact me via my blog, via social media and they say that the serotonin hypothesis is a sales pitch from the pharmaceutical industry to sell psychotropic drugs and we shouldn't be thinking that anxiety and depression is actually as a result of low serotonin. And I'd love you to just share your thoughts on this.

Peter Bongiorno: Sure. Well I think the thing is because there is something called a catecholamine theory and that suggests that these neurotransmitters really do play a role in mood. And certainly they do but it's a little bit confusing in terms of the history how everything started. There was a fellow named Schildkraut in 1965 who came up with the catecholamine theory based on how they saw certain drugs that were being used for other conditions affect mental health.

But really if you look at the reviews of the literature there's very, very little that supports things like that serotonin for example is strongly related to depression. There was this Journal of the American Medical Association review of a number of studies that came out in 2009 and it looked at what was called the serotonin transporter gene in people. And they looked at people's stressful life events. And what they found is that the changes in the gene didn't really correlate with elevated risk of depression. But stressful life events did. And then there are other studies which suggest that it's not really so much the neurotransmitters that are as much the issue as the resilience of the system itself, of the nervous tissue of the nervous system itself. And we're starting to believe that that might be one of the reasons why when antidepressants work - which studies have shown really maybe 30 percent at best and probably less than that which isn't much higher than placebo - it might be because they make changes in what we call neuroplasticity in the brain which is the ability of the nervous system to kind of adapt to changes and to stress and to stimuli.

It's really interesting because for example again when you talk about serotonin mostly because that's the thing that's been the most studied. And if you look at that there's serotonin reuptake inhibitors and those help keep serotonin around. And they have a pretty stable 30 percent effective rate according to the newest study. If you look at medications there's a medication called Stablon which is a serotonin reuptake enhancer it does the complete opposite and it actually gets rid of serotonin. It also has about the same rate of effectiveness. And that's really thrown a kink into the whole system because now people are really saying well then this doesn't make sense this whole link between serotonin and depression. And that's because there are really so many other factors that are part of mood and part of whether somebody gets depressed and somebody gets anxious.

There's this old cartoon where there's this fellow - and you may have seen it before - where this fellow walks out of a bar drunk and he goes to this empty parking lot and he realizes he dropped his keys in the parking lot before he came in. And so he's looking around but

only under this light post whereas the rest of the parking lot is dark. And so a cop comes up to him and says hey man, why are you just looking here? And the drunk man says well it's because the light is better here. And that seems to be what we're doing when it comes to mood disorders. We're studying the same thing over and over and we're not really looking at the whole rest of the parking lot where there's so much more information to be had.

Trudy Scott: And you mentioned the fact that this doesn't make sense. I've had a few people say well everyone's talking about low serotonin and social anxiety. And then the study comes out and it says a lot of people with social anxiety actually have high serotonin. So this all goes back to the same thing that you're talking about. It sounds like looking at the same thing and then there are different results that we're seeing.

Peter Bongiorno: Exactly. And that's why I think it's important – and this is what I talk about in my books and I lecture about - is it's important if you're thinking about trying to support and balance neurotransmitters whether it's with drugs which, you know, in most cases I think probably isn't a necessity or even with natural supplements. I think the first thing that's really important is to look at underlying reasons why the neuroplasticity might be low or the neurotransmitters might be off. And that's usually going back to the naturopathic basis of looking at people's sleep, looking at whether they're exercising, looking at the foods they're eating, looking at if they're happy in their life, if there's a lot of stress, if there's a lot of environmental toxicity. Are they getting the nutrients they need? All the basic things over time - whether their digestion is strong, whether there's inflammation in their body. Because in the end those are the things that really dictate whether the brain and the neurotransmitters will be balanced. Whether it's a neurotransmitter issue or a neuroplasticity issue we still have to get back to the basics. And that I think is what really needs focus in terms of psychiatry is getting back there. Because that can help the most people.

Trudy Scott: And this is where you talk about your three legged stool, correct? Or was it a four legged stool?

Peter Bongiorno: Yes the four legged stool. And some of my presentations and in the opening of my anxiety book I talk about that. I have a picture of a stool and on the top of the stool are written thoughts. And then all the legs underneath the stool and the cross supports represent different things like sleep, exercise, supplementation, blood sugar balance, good digestion, a person's spirit, relaxation, supplements.

All those things can help really support the top which is our good balanced healthy thoughts and mood.

Trudy Scott: Excellent. And I'm glad we made this distinction because it's not just one thing. We need to look at everything in its entirety and we need to look at the root cause. We're just talking about one specific area here. So I've got a follow on question about what you just talked about. You mentioned this drug that gets rid of serotonin. What is the name of that drug? I didn't catch that.

Peter Bongiorno: It's called stablon, S – T – A – B – L – O – N. And it's a selective serotonin reuptake enhancer. And when it started helping people with mood everyone got confused because they said well wait a second. I thought serotonin was too low and you give them a drug and it raises it. And now they give them a drug that does the exact opposite and getting as good results as the other. So now they're thinking well, wait a second. Maybe we don't have this mechanism right at all.

Trudy Scott: Could it be that it's related to biochemical individuality and for some people they may have mood issues because their serotonin is high and some may be because it's too low?

Peter Bongiorno: Right. I think its two things. One I think because maybe both sets of people have a neuroplasticity issue and in some way it might help that. And then secondly everyone is so different which is why like you mentioned that other person and they took the medication and I'll see this. I'll see people who will come in with anxiety, with depression. They'll take an SSRI and they'll feel much, much, much, much worse. Or even worse I've seen a number of people now that will put them into what they diagnosed as a bipolar episode. And they never even had bipolar because they just didn't need all that extra serotonin. So right, everyone is so different and just because they have anxiety or depression it doesn't mean serotonin is low.

Trudy Scott: Right. Now also going back to this if we're saying it may not be serotonin itself why do we see benefits with some of these nutrients that we think or we've seen research showing raises serotonin like tryptophan and 5-HTP and some of the other nutrients we're going to talk about today.

Peter Bongiorno: Sure. Well tryptophan specifically the mechanism is likely because it helps raise serotonin. I mean you have to remember that when you're taking tryptophan maybe one percent of it actually gets converted to serotonin. So it's still a quite small effect. And I'd

venture to say most of those studies put tryptophan and compared them to the drugs. And we already talked about how the drugs don't really have that great efficacy. And my guess is that the supplements by themselves have a little bit of efficacy like the drugs but probably not in totality unless we're doing the other things I mentioned along with it which is why it's important to do the sleep and the diet and the exercise. I know by the end I'm going to sound like a broken record saying the same thing.

But as far as St. John's Wort I would honestly put that in a different category because St. John's Wort is not just another type of serotonin enhancer or SSRI. It has many, many other activities. It supports the thyroid. It really helps digestion. It's a good anti-inflammatory. It calms the nervous system. And it also supports other neurotransmitters too. So to me St. John's Wort is more like a beautiful food that has these very pleiotropic effects and really helps the whole body kind of cope and gain resilience. Years ago St. John's Wort was originally used to ward off evil spirits in olden times. And so it has a tremendous history of supporting people with mood and especially people who are very fatigued in the process and they can't cope and they have no resilience. So I think St. John's Wort is definitely more than just a serotonin enhancer.

Trudy Scott: Now St. John's Wort is used more extensively in Europe than it is in the U.S. What have you found in terms of when you would decide to use St. John's Wort versus using maybe tryptophan or 5-HTP? If someone has some of these other issues as well like digestive issues or thyroid issues or fatigue like you just mentioned.

Peter Bongiorno: Exactly. When you see a whole constellation of symptoms, St. John's Wort. It's the most studied herb of all time so I certainly trust it and it has a beautiful history of use. The one time I wouldn't use it is if a patient is on many medications, especially medications that are known to interact with St. John's Wort.

Trudy Scott: And some of those are?

Peter Bongiorno: Well birth control pills are a good example. A number of pain medications. Some of the MAOI, you know, monoamine oxidase inhibitors. There's a very long list. I list them in my books. And there's a certain liver component that St. John's Wort works through and that many of those drugs also work through which is why it can change the levels of those drugs. Having said that it's also important to remember when it comes to natural medicines that sometimes herbal remedies can even be helpful. There are studies about this – there's a platelet inhibitor what they call a blood thinning drug called

Plavix. And what they've shown is that patients who don't respond well to Plavix if they take St. John's Wort with it they can actually get a 36 percent better response and get less side effects because they don't have to use as much of the drug.

So it's important to remember this. I think doctors are always worried about negative interactions but we need to also start studying more of the positive interactions and really learn about those because I think herbal remedies and nutrients can actually be used with medications quite safely in the right circumstances and help the patient in the process.

Trudy Scott: That's very interesting. Yes look at all the pros as well. That's really interesting. Now a follow on question about St. John's Wort. Can that be used during pregnancy and breastfeeding?

Peter Bongiorno: There are some studies that suggest it may be safe for both of those circumstances. But I don't recommend it because honestly there aren't enough studies. And even though it seems like it has a safety factor in both of those cases the problem is no one is going to study these things in pregnant women and of course for ethical reasons. So I can't say for sure it is so I won't use it that way in my practice. But there are some case studies that do suggest it may actually be a reasonable option.

Trudy Scott: So Dr. Bongiorno what do you use for someone who's pregnant and depressed or anxious?

Peter Bongiorno: That's a great question. I mean so the first thing is really again focusing on the basics. Making sure a woman is getting very good sleep, making sure that she's exercising and that they're working on stress. Really making sure her support system is excellent. Making sure they're getting enough of the nutrients that they need during pregnancy like getting plenty of essential fatty acids which often can be very depleted. One thing that's very important is looking at thyroid function. When thyroid function is low and the person is predisposed to depression then that certainly can play a role. So making sure the thyroid is optimal. And that might mean giving a little bit of extra of a glandular or even a natural thyroid replacement as well.

One of the things I like to check is something called carnitine which is an amino acid which plays a role in how energy is carried in the body. And many women get much depleted in carnitine as they move through pregnancy through the trimesters. And that's actually quite safe to take during pregnancy and I've seen that be very, very

helpful in women with mood issues either during pregnancy or postpartum. And there are plenty of studies that show the safety of carnitine. So that's one of the things I definitely like to look at along with taking some magnesium which is also safe during pregnancy.

Trudy Scott: Okay, excellent. What do you think about light therapy? Would that be beneficial?

Peter Bongiorno: Oh absolutely. Especially if there's a seasonal component to it. Especially if it's wintertime and there's a lot of darkness. Yes absolutely. And a lot of men and women have Circadian rhythms that are very off. Their body doesn't know exactly when night is and exactly when day is. So even something like light therapy, plenty of intense light in the morning can be very, very helpful to reset the stress system which can help lower both anxiety and depression.

Trudy Scott: Great. And I wasn't aware of the carnitine factor so that's really good to know.

Peter Bongiorno: Carnitine is something that's not too well known about but I definitely see excellent results. Carnitine the word carni means meat and there are people maybe it they're not eating enough meat – some people really do need to eat some meat and if they're not eating it they can get depleted very quickly.

Trudy Scott: Good to know. And continuing on the pregnancy discussion what about zinc? We often see high copper levels which can contribute to postpartum anxiety and psychosis and OCD. Have you found that to be an issue and supplementing with zinc? Would that be considered safe?

Peter Bongiorno: Well I think as long as it's done in physiologic doses things should be fine. I mean zinc is in a prenatal vitamin. Like any mineral that's a little bit on the heavy metal side you don't want to overdo. So I would say between 15 and 30 milligrams would be considered reasonable.

Trudy Scott: Okay. And then any comments on medications like SSRIs during pregnancy? Not the greatest idea?

Peter Bongiorno: Sure. I mean obviously we have to think about the safety of the woman and I think if there are circumstances where things are quite unsafe and there's no other choices then maybe a medication might be tried. The concern of medication is that there are a certain percentage of abnormalities that can occur. I know things like atrial septal defects can be an issue where the heart has changes. There

can also be changes in how the stress system sets up. Serotonin is an interesting molecule because in the developing baby it's one of the signals that the body uses to kind of lay down its track and know where it's going to put things. And so when you start playing around with serotonin you're playing around with the whole system of how the body kind of blueprints what's going to come next. And that's the reason why they do seem to have side effects.

So of course everything is about risk and benefit but I think if a woman has a very strong support system, she's very well monitored and all those other basics are being checked into I think in most cases there are many other opportunities to try more natural ways first.

Trudy Scott:

Okay, great. Thank you. And I think that's great. I think the big thing is for people to be aware that there are these other options which is the reason why we do these summits and why you've written your books. So people know that there are options. Because too often they're going to the doctor and they just don't even know there is another option. And to have all of these options, these lifestyle changes available to them I think can make a very big difference. And they're looking at things like gut health and carnitine levels, all things that a lot of people aren't even aware of that could be contributing to how they're feeling. So thanks for sharing all of that.

You'd mentioned St. John's Wort and interaction with some medications. And when it comes to both 5-HTP and tryptophan there is the theoretical concern with serotonin syndrome. And I have been taught to have my clients - if they're on SSRIs - work with their doctor and get the okay to use the tryptophan or 5-HTP and to use the tryptophan or 5-HTP at least six hours away from the SSRI because of the possibility of serotonin syndrome. And you have experienced some different things. You've looked at some of the research and you've got some different thoughts. And I'd just love you to share what you have found with the research that you've done, what you've written about and then what you've seen in practice in terms of serotonin syndrome and using these two amino acids.

Peter Bongiorno:

Right. Well what I talk about in the book is that there is a theoretical idea that if you have too much serotonin around that it's going to cause serotonin syndrome which can be things like a very strong headache, irritability and even worse it can make blood pressure go up and really be dangerous to the body. So there is a reason to be concerned.

A lot of the conventional doctors when they see patients taking supplements like 5-HTP and tryptophan which are serotonin precursors the worry is that you're going to increase tryptophan too much and create the syndrome. I don't know of any literature that really shows that happen. What I do talk about in both my textbooks and my book to the public that there are a number of studies now that use things like tryptophan or 5-HTP together with SSRI medications, things like Prozac. So I think it can be done safely and I think there's a number of studies when you compare them or use them together that have shown that. I still think it's really important to be careful and to start with the very low dose as a patient. I think the first thing that's important is if a patient is taking medication is that they create a stability with that first and that they kind of create a baseline where they're taking a fixed amount for a period of time and you know how they're feeling.

And then if you're going to add something like tryptophan or 5-HTP you start slow. You start at the low doses one time a day, preferably away from when they're taking the actual medication and we see how they do and we monitor closely. That's the safest thing to do. Most of the studies about serotonin syndrome really occurred – I think the majority of the cases are in patients who have AIDS who are also taking anti-retroviral and AIDS medication. For some reason there's an interaction there with those SSRIs and those anti-retrovirals which can increase serotonin syndrome.

Or in patients who are taking multiple medications. I mean one thing that's interesting to me is I will see sometimes my patients have their conventional psychiatrist who won't be interested in adding a little bit of tryptophan but they're totally comfortable with adding another drug like a tricyclic or Wellbutrin which are far, far stronger in terms of how they can change brain chemistry. So to me it doesn't make a whole lot of sense. I think the natural supplements are pretty gentle and but it really can also play a role in repleting the brain instead of depleting it which I think the drugs are more apt to do.

Trudy Scott:

Now you mentioned some conventional psychiatrists are not okay adding tryptophan. How do you work with a patient who comes to see you? They're on one of the SSRIs and they want to get off the SSRI. I know you write about this in your books but just walk us through how you would work with someone in terms of working with their doctor. So if someone is listening to this and they know what they need to do and to have this conversation with their doctor.

Peter Bongiorno: Right. Well the first step is really to work on what I call the naturopathic basics. Work on sleep, work on food, work on digestion. If there's inflammation in the body to lower that. One of the concerns about using tryptophan and raising serotonin is the whole issue with there's another molecule in the brain called quinolinic acid which sometimes when you give tryptophan it can be converted to this quinolinic acid which actually creates more neurotoxicity in the brain. So it's really important before adding things like tryptophan and working on the neurotransmitter that we really work on the basics first.

So if a patient comes in and they're on a medication, especially if they're doing fairly well and they're not having side effects there's no reason to touch that. Leave that alone and let's start working on the basics and working on the underlying causes of maybe why the neurotransmitters and the mood got to where they've got to. So we start with sleep and diet and exercise and spirit, inflammation. Working on creating the healthiest digestion possible. Making sure people are pooping once a day, eating really good quality food. Maybe getting some acupuncture. And doing some other mind/body work or massage therapy which by the way has also been shown very good for pregnancy and postpartum – massage therapy. I should have mentioned that before. And doing all those things and making sure those are as good as we can get them. And then once a person has been on that kind of program for a couple of months it's actually kind of amazing.

I'll often see my patients they'll notice the shift themselves. And they'll say, you know, I've been doing this for a while. I really feel different than when I first came in here X number of months ago. And I think maybe now is a good opportunity to make a change with the medication. So oftentimes my patients will tell me when they think they're ready. And then at that point one thing I do recommend is not doing it in the winter usually if possible. Because I find when there's more light in spring, summer, early fall that's really the best time. So I usually don't recommend in the winter. And so if it's the right season and they've been on the program for a while and they feel good and shifts have been made then the next step is to talk to their prescribing doctor and make sure everybody's on board with what's going on. And then talk about how to support the neurotransmitters in the brain specifically using the right nutrients very slowly as they start the weaning process.

And the weaning process would have to be different for everyone. Some patients who have been on some of these mood altering medications for many years you can't just wean off quickly. You

have to go exceedingly slow. And depending on how they do then we can support their brain and their body with more nutrients to help that process go as easily as possible and minimize any kind of withdrawal effect. The body will tell us what to do as we go along. But again the most important thing is that we really establish all the basics and that they're in the healthiest place possible. Because if those aren't there, if a patient just gets off the medication and we haven't really done anything to change the underlying reasons why they got to the place where they had the mood issue. In most cases they're going to go back there again. Does that make sense?

Trudy Scott: It absolutely does. So get all the basics done which you've talked about and it's important that the diet is good and I'm glad you mentioned digestion and pooping and the mind/body work and all of this. Get all of this in place. Then work with a prescribing doctor and then at that time as you start to taper the medication which would be based on an individual person and how they're doing but obviously really slow that's when you would add in the 5-HTP or the tryptophan or possibly even St. John's Wort. Correct?

Peter Bongiorno: Possibly. It really depends on – I usually start with the medication a person is on and look at that mechanism. Like for example if they're taking Wellbutrin which preferentially can raise dopamine then we might want to start with herbs and things that kind of support that process a little bit. Or if they're taking antianxiety medications then maybe supporting the process of things like valerian or kava. So there's many choices. It's just going to depend on really where they are and what kind of support they need. And I always recommend in my books and I just want to remind everyone listening please don't do this by yourself. Really work with a doctor because these drugs are strong and sometimes when you're taking them and especially if you feel okay you don't always realize that they can have a very strong hold on your brain and on your nervous system. And removing them and not doing it carefully can really put people in a bad place and sometimes in a dangerous place. Even people that have never had mood issues if they've taken those drugs for a while that can happen to them. So I really want people to do this safely because it is a little tricky and I want them to know that their body can heal but they need to have the right support and the right monitoring and to be perfectly safe.

Trudy Scott: Thank you for saying that. And we don't want anyone to be listening to this and just stop their medication cold turkey because that is not a good idea and the fact that you need all of these other underlying factors in place and you need to have someone

monitoring you and looking after you is really, really important. Thanks for making that clarification.

So I've got two follow on questions for you. So you talked about getting all the basics in place. Then talking to the doctor and then adding whatever the nutrient is whether it's for serotonin support or whether it's for GABA support or whether it's to support dopamine. Do you never use these nutrients earlier on in the process like when someone first starts working with you?

Peter Bongiorno: That's a great question and I do. I will use them earlier in the process. My first thought is that if someone is still having symptoms and they're not 100 percent themselves or where they want to be in terms of mood then I will bring in the nutrients earlier. And very often I do. Thank you for asking that. I should have said that. Yes absolutely. There's a place for them in the process and there's certainly a place for them in the weaning as well.

Trudy Scott: Okay, thank you because I just wanted to make sure we had it down. And I know there's so many different variations and it depends on each individual but I wanted to bring that up. I certainly use the aminos extensively with my clients and often I find that adding in the tryptophan or tyrosine or GABA right at the beginning helps them make some of those real changes. Because if you get off gluten and get off sugar and have these other emotional eating components I found that it makes it easier. And often people are on the medication and they're not getting all the benefits so they are looking for some other emotional support. So I'm glad we clarified that one.

Peter Bongiorno: And sometimes it's smart too because oftentimes the drugs, especially if they've been on them for years will actually deplete some of those particular molecules. And so part of the process of getting them to the point where they can wean off we'll include repleting that. So especially if I hear people have been on things for a long time then I often will want to start early on in the process even if they're not having any kind of mood issues at the moment. So absolutely.

Trudy Scott: Okay, great. So I want to come back to benzodiazepine tapers in a second but you had mentioned quinolinic acid and there are concerns with some practitioners not wanting to use tryptophan at all and not recommending it at all and then some say don't use it if you've got inflammation or dysbiosis. And the fact that tryptophan can go down the kynurenine pathway and convert to this neurotoxic quinolinic acid. So you had mentioned it. How do you prevent that,

or how do you measure that and how concerned are you about it? You'd mentioned the fact earlier on that only a small percent of tryptophan is actually converted to serotonin. So how big an issue is this and how can we prevent it from happening?

Peter Bongiorno: Well I think I would consider it a medium issue. I think when people have a lot of inflammation in their body then I think it's more of a concern. Having said that I'm not too concerned about using tryptophan as long as we're working on the inflammation and getting their diet corrected. If we can get the diet correct then I find it's a much easier process. And as long as we get the nutrients in there that a person needs things like vitamin B6, niacin, niacinamide, riboflavin. As long as they're getting good activated forms of those B vitamins then the body should have what it needs to make sure it doesn't go down that pathway. And in clinic I haven't really seen too much of an issue and I haven't seen people untowardly get affected by getting tryptophan. I also don't use very, very high doses in many cases so I think as long as you keep the dosing reasonable and you watch out for those factors and take care of those then it shouldn't be too much of an issue.

Trudy Scott: What would you say is a reasonable dosing? How high do you go?

Peter Bongiorno: Well if I'm using tryptophan I'll usually start with 500 milligrams which is a very small amount. It's usually the lowest dose you can get in a capsule. And then I'll move up to 2,000 or 3,000 a day. Occasionally some people are going to have 5,000. But I suspect if they need that much it's usually because they're just not absorbing all that well. And for certain patients I'll give them 2,000 at night especially if they're having trouble sleeping and that's a big part of the picture of why they have anxiety or they have depression.

Trudy Scott: Okay. And then for 5-HTP the equivalent of 500 milligrams of tryptophan is 50 milligrams of 5-HTP so you would just dose accordingly with the 5-HTP as well?

Peter Bongiorno: Exactly. I tend to dose things a bit lower than I know a lot of my colleagues do but I do find it works quite well and then maybe it's just because I do a lot more of the other underlying issues sometimes. Because I find if you do it all together you don't really need high doses of things. And I think that's good because there's less chance of side effects or getting in trouble.

Trudy Scott: Excellent. And I'm so glad you mentioned the cofactors, the B6, the niacinimide, the riboflavin. These all help the tryptophan go down the correct pathway. And as part of this summit I'm actually going

to be interviewing Ron Sturtz from Lidtke, the company that makes the tryptophan that I use in my practice. And he has a product that has a combination of nutrients in it. I know you have formulated your own product that has a combination of these nutrients that provide the cofactors to stop this happening. Correct?

Peter Bongiorno: Yes absolutely. I mean I think there's a number of good quality supplements out there. Luckily we have companies now that have integrity and are making good products and are very thoughtful about how they're putting them together. So luckily consumers and patients have some good choices.

Trudy Scott: Yes, good. Continuing on the quinolinic acid discussion, you can measure this in organic acid testing. Do you ever do that?

Peter Bongiorno: That hasn't been something I've done in my practice. I know you can and I have read some of that information but that's not something I've been doing in my practice. I really can't speak to it all that well.

Trudy Scott: Okay, good to know. Good to know that you haven't felt the need for it and you said you haven't seen much of an issue with using tryptophan so it's just good to get this feedback. Thank you very much for sharing that.

Now as I said, I was going to ask about the benzodiazepines. Now I assume you would do a similar type of thing with a benzo taper. You would do all the basic stuff, support GABA and work with the prescribing doctor in the same way. Now I am very critical about benzodiazepine use and the fact that this is not a class of drugs that's supposed to be prescribed long term and the effects that people have. They build up tolerance and then they have all these withdrawal symptoms. So I'm very big in educating people about this and I have a lot of people from a lot of the support groups connecting with me saying they have been told in these support groups - which are wonderful because there's a lot of people who aren't aware of how problematic they are so they're getting wonderful support - but a lot of them are told not to use any nutrients while they are doing the benzodiazepine taper. I've seen a number of clients do much better on a benzodiazepine taper when they are using the nutrients. And you and I had corresponded a while back and you said you use the nutrients when someone is doing a benzodiazepine taper. Could you talk a little bit about why some people may have a problem? They say they can't tolerate any nutrients. And then what have you seen in terms of working with people who are doing a benzodiazepine taper?

Peter Bongiorno: Sure. Well the idea of a benzodiazepine taper. We talked about antidepressants before and in mild to moderate depression especially whether they work at all is very questionable or very minimally more than a placebo. Antianxiety drugs I think are effective in helping people feel calmer. There's no question that they help the majority of people who take them. I mean that's been my experience in my office. I don't know what you've seen. The problem with them is that they're all very addictive and they're just highly unhealthy for the brain and or the body. And no one can take them for an extended period of time and not become addicted to them. As well as having side effects in the process. So they're just addictive drugs and they're very, very hard to get off once you start taking them. And even more they're not fixing the reason why a person feels that way.

I mean the reason why I was so excited about the anxiety book I wrote is because I just saw so many people here in New York who are on antianxiety drugs - just chronically. And then they have to take more and more and more and then stronger ones and then stronger ones. And I do really feel that anxiety is so beatable. People can put anxiety behind them if they really feed their body and nourish their soul and then do all the things naturopathically that really help the body balance and heal. So I just think it's a crime that so many people are on these drugs and aren't addressing really what needs to be addressed. And now is a really great time that people can look and say listen, I have other options. It's not just about the drugs to suppress my symptoms. I can really make the changes I need and really beat this anxiety.

Trudy Scott: So when you're working with someone doing a benzodiazepine taper generally speaking do they tolerate GABA and some of the other nutrients?

Dr. Bongiorno: I'm sorry I didn't answer your question. In my experience I don't have an issue. I venture to say that if people are weaning and can't tolerate the nutrients my guess is it's more of a discontinuation syndrome. The actual withdrawal more than anything. And I've done this with scores of people and I don't really see side effects from taking nutrients along with the benzodiazepines. Again like I said before we don't start at very high doses and we have to tread very gently and do all the basics first to make sure the setup is right and their body is in a healthy place to do this. But no, I honestly don't see it – I mean people will have reactions to certain things just as anyone can react to anything so there's always a possibility and you have to watch out for that. But it's exceedingly rare in terms of

as a general rule when I work with these nutrients helping people with the medications.

Trudy Scott: Okay, thank you for clarifying that. It wasn't actually in our planned discussion but since we were talking about medication tapers I think it's good that we added it in. So thanks for clarifying that.

Dr. Bongiorno: I would even go as far to say I think it's very hard and for some people next to impossible not to have that kind of support while tapering off because the body needs help in that moment. It's very, very hard for the brain, the neurotransmitter system and for the body to recalibrate if it doesn't have really good support. So I would go even further and say that they absolutely do better if they get the right support.

Trudy Scott: Right. And that would be nutrients and then all of the basics that you've talked about. Absolutely. Great. I'd like to just talk about two other products that you use with patients and I heard you talk about these when I heard you present at the *Integrative Healthcare Symposium* in New York City. And it's not something that we hear a lot about. Saffron is one of them and then the other one is a herbal product that has a brand name Venetron. Can you talk a little bit about saffron and then let's talk about the other one as well.

Peter Bongiorno: Yes absolutely. So saffron, you know, people probably know saffron as a spice. I think the most expensive spice that you can buy and it's delicious in things like paella. It has a high amount of antioxidants and the carotenoids are very high which gives it that beautiful orange color. It has a lot of B vitamins in it as well that comes from Persian traditional medicine. And it's actually one of the things I actually formulated a supplement called Mood System Support and saffron is one of those components. And the reason why I added it in there is because saffron has a really good history for mood balance as well as helping the digestion, helping the body digest food and reduce spasms. And I would say the majority of my patients who I work with with mood also have digestive issues which makes sense because most of the neurotransmitters are made in the digestive tract. So saffron is one of those herbs that really can work on both of those.

And studies have been shown that it can help keep balanced levels of dopamine, norepinephrine and serotonin. And even what they're doing with drugs now is they're trying to come up with something that works on all of those at the same time. There are some studies, one eight week study that came out a few years ago of 40 adult depressed patients and they even pitted the saffron against Prozac.

And what they found was that the saffron was at least as effective as the drug, less side effects, had a very good responder rate. So saffron is a very good place to start when you have mood issues and especially when there's digestive issues and inflammation issues too.

Trudy Scott: Excellent. Any recommendations in terms of dosage?

Peter Bongiorno: Yes. Usually I recommend around 15 milligrams twice a day.

Trudy Scott: And with this one would you need to be aware of possible interactions with any medication?

Peter Bongiorno: None that I know of. Because it really doesn't work at that mechanism. And the other thing is I know I mentioned it's quite expensive but the interesting thing is they did studies on both the stigma of the plant which is the saffron we know that we typically add to food as a culinary spice. But then there's also the petal of saffron which has the same compounds, safranal and crocin in it as well. And it's much less expensive. So you don't have to spend hundreds of dollars on a bottle of saffron. You can actually get the petals and you'll get the same benefits in terms of mood and health.

Trudy Scott: I love it. Is there anything that we need to know about in terms of quality or is it pretty much all the same?

Peter Bongiorno: I would say like any supplement you definitely want to go with a company that's a very good quality company that's harvesting it from clean places, that it's been checked for mold and all that. And of course any good company is also going to check the content to make sure that the compound, the active compounds are in there. Active compounds are interesting too because when plants are raised in different environments their compounds will change. And even though I mentioned these two compounds safranal and crocin as part of the saffron my guess is in a lot of other beautiful carotenoids and compounds that we don't even know the names of nor what they do and they're probably part of what's helping as well. So I would just say stick with a very good company that you know is very clean and is checking for any toxicity and mold and things like that.

Trudy Scott: Wonderful. And then you've got yours as part of your Mood System Support. Is that what your product is called?

Peter Bongiorno: It's actually labeled – I don't know if I can mention company names.

Trudy Scott: Yes go ahead.

Peter Bongiorno: There are two supplements I formulated for Douglas Labs which is again a very good high quality company. They really do their homework and the one with the saffron is called Mood System Support. And it also has chromium in it. It also has curcumin in it. It has berberine in it. It has rhodiola in it. So it has a number of things that act on different systems of the body to help specifically with the anxiety and depression.

Trudy Scott: Tell is a little bit about some of the other ingredients and how they might help with anxiety and depression seeing you've listed them.

Peter Bongiorno: So chromium – and I talk about all these in the book as well. So chromium was probably one of the leading minerals to help with balancing blood sugar. Because many, many people especially with anxiety you see blood sugar kind of all over the place. And so it's really important to start the balancing of blood sugar in a way that gets the anxiety under control. So besides eating small frequent meals throughout the day and making sure a person's getting enough protein the chromium could be very, very helpful in that process.

Trudy Scott: Excellent. And then the curcumin we know helps with mood and inflammation. Anything else?

Peter Bongiorno: Yes curcumin is a beautiful anti-inflammatory herb. Rhodiola which has been well studied especially in Russia as a way to support the adrenal system and the stress system. Especially for people who are very kind of – rhodiola is an interesting herb because it was studied in Russian soldiers, people who are just put on the front line or just kind of have been through it all multiple times and they're very, very fatigued. So rhodiola has been shown to really balance the adrenal system very nicely and help calm. It's a good antianxiety herb. It's good for depression as well.

And then there's berberine as well and berberine is really well known as a digestive herb but it also has a number of other properties that help balance neurotransmitters too. And it even works on something they call the sigma-1 receptor which people are learning more about how the sigma-1 receptor can be part of how neurotransmitters are also balanced. So berberine is a really interesting compound and I think in years to come we're going to start seeing it used for a lot more than just as a natural antibiotic. So it's just beautiful for the digestive system and it's healing for the digestive system. Not only does it help balance the flora and get rid of bacteria that shouldn't be there but it also helps the healing process of the lining of the intestine which I think has a good anti-inflammatory effect as well.

- Trudy Scott:* Wonderful. Yes I know berberine as a natural antibiotic and I was a little bit familiar with the digestive process but not familiar at all with the fact that it helps with neurotransmitter support. So this is interesting. I love doing these interviews because I always get to learn too.
- Peter Bongiorno:* I'll send you some of the materials I have on it.
- Trudy Scott:* Okay that would be great.
- Peter Bongiorno:* It's good stuff.
- Trudy Scott:* And we'll include some of those links and some of the other studies that you've mentioned and we'll include a link to those products so folks can look at it if they want to look into it. It's great that you've put these formulations together because I think it's good to hear from practitioners who are actually using these and seeing results with it.
- Peter Bongiorno:* I'm excited because I just came back from Dallas and I spoke to a functional medicine group of physicians down there and I'm excited because I'm hearing very good results with these. So it's excellent. It's exciting to see physicians now have other tools that they don't have to always go to the drugs first. That there are other tools they can use that are natural and healthy for the body. So it's just so exciting.
- Trudy Scott:* It really is Dr. Bongiorno. You know I just saw an article in one of the support groups that I'm part of and they were talking about the fact that the American Psychiatric Association wants to bring back electroconvulsive therapy and they were saying they want it to be approved for use in children because they've got this treatment resistant depression and they can't get answers. They can't get solutions for them with some medications that are being prescribed. The unfortunate thing is they don't know about all these beautiful tools and all these beautiful things that we talked about today. We really appreciate you getting out there and talking to physicians so they have these other tools at their fingertips so we don't have to resort to some of these what I consider backward approaches when we've got all of these wonderful food changes and lifestyle changes and nutrients that we can use getting to the root cause of the problem.
- Peter Bongiorno:* Amen. It's interesting you mentioned electroshock therapy. And that's used especially to treat drug resistant forms of depression. There's some information that suggests – so I'm a naturopath and as

a naturopathic doctor you learn a lot about hydrotherapy. So hydrotherapy is the application of hot and/or cold water to the body. So electroconvulsive therapy increases norepinephrine. So an amazing way to increase norepinephrine in the brain is cold water. So some of my patients what I'll have them do is do shower hydrotherapy where they start warm and then they slowly turn down the shower until it's cold. So it's as cold as they can take it. And then they do that for a minute or two up to five minutes if they can - down to about 68 degrees Fahrenheit.

And I tell you I've seen some good results with patients and it's because it's a natural way to increase your own norepinephrines. Electroshock therapy can do that. Granted electroshock therapy is not as brutal as it was years ago. It's a bit more gentle and it's a bit more specific but why not try something natural first if you can, especially if you can get the affects you need.

Trudy Scott:

Excellent. I'm glad you brought up hydrotherapy because I was going to ask you about that one. And I think it's good that people can know that this is an option to do and why not do something like this. My concerns with the electroshock therapy are that they are being prescribed an anesthetic when they do it so you've got that possible side effect. And then they also prescribe a muscle relaxant. And some of the time it's a benzodiazepine. So now these kids or people who have been given this electroshock have been given benzodiazepines as well. So I'm all for hydrotherapy and berberine and saffron and 5-HTP and everything else. I think let's use those. Let's make sure people know about those.

Now the last one that I wanted to mention was this herbal product and there's a brand called Venetron. Just tell us a little about this.

Peter Bongiorno:

Venetron is what I call the new St. John's Wort on the block. It's well known in Chinese medicine. The Latin name is called *Apocynum venetum*. And it's basically a shrub and in Chinese medicine it was used for what we used to call neurasthenia, patients who have a lot of palpitations, patients who have insomnia, people who tend to retain water a lot and urinate frequently what they would call that kidney chi deficiency. People with high blood pressure, things like that. That seems to be the picture of how the Chinese would use that for the last few thousand years.

It does have a lot of flavonoids in it. It doesn't have any of the same molecules as far as we know that St. John's Wort has. So in other words St. John's Wort has active components that they call hypericins and hyperiforms. But that's not what's in venetron which

really what they're looking at right now is mostly the flavonoids. And it does have pretty significant antidepressant effect which I think is because of its ability to naturally bring up norepinephrine which you talked about which is what the electroconvulsive therapy can do. Dopamine and it also brings up serotonin. So almost what we talked about with the berberine and in a different way it's the same effect. And it also has nice anti-anxiety effects. So it's good for patients with anxiety and depression.

Trudy Scott: Have you found that you would use this when someone maybe hasn't benefitted from some of the others? When in the process would you use this versus some of the others we talked about?

Peter Bongiorno: I've been using it more in a combination formula. Like I said the other formula I formulated for Douglas Laboratories is a formula called Neurotransmitter Balance. And that has venetron in it along with 5-HTP, SAMe, mucuna which supports dopamine and some tyrosine. So I use it more in that formula more for depression and especially that depression that has those other symptoms along with it that insomnia, the swelling and retaining fluids and that type of picture. Chinese medicine they call depression phlegm misting the mind. And so this is a nice herb for that purpose probably because it kind of gets that norepinephrine going and helps kind of clean things out a little bit.

Trudy Scott: Interesting. Well thank you for sharing that.

Peter Bongiorno: I'm excited to see more research as it comes out. It's definitely an herb that not a lot of people know about but you will be seeing more of it. And I know there's other companies that will probably start coming out with this herb in the future.

Trudy Scott: I like to know about the most recent developments and the newest research and I can always count on you to be up on that so I appreciate that.

Peter Bongiorno: The newest research on the oldest herb.

Trudy Scott: Exactly. Something that's been around forever and how we say oh, this is new exciting research. That's good.

Peter Bongiorno: What we're doing with the tropical rain forests is such a disaster is every day we're just losing things we don't even know about.

Trudy Scott: Well if we can bring back trusted traditional herbs and products and have benefits with them I think that's great. Why not. And a lot of

people like to see the research and if we get the research on this and more people use it and see benefits then it's a good thing.

Peter Bongiorno: Absolutely.

Trudy Scott: Well this has been absolutely fantastic Dr. Bongiorno. I wanted to just let everyone know that we've got a nice digital gift *Ten Ways to Balance Serotonin Naturally* and we will send them to your website. Do we have the link for that right now? I'm trying to remember if we have that.

Peter Bongiorno: Yes it is DrPeterBongiorno.com/serotonin.

Trudy Scott: Excellent. So if you enjoyed this and you want to stay connected with Dr. Bongiorno feel free to go to his website and sign up for that gift and then you'll continue to hear from him. And I'll make sure to include links to your books and some of the products you talked about and some of the research so folks can take a deeper dive into some of this wonderful information. Any final words of wisdom for us today?

Peter Bongiorno: Gosh no I just want to stress to people that working on the underlying issues is very important and getting all the basics, the sleep, the diet, the exercise, the stress and the right nutrients in is very, very powerful and your body really does know how to heal and it does know how to balance. And sometimes it takes little wrangling but it can absolutely be done. And thank you Trudy for just really putting out amazing information and helping people heal. And I know you've changed the lives of thousands and thousands of people for the better. You certainly changed my life for the better and I really appreciate your support too. So thank you.

Trudy Scott: Thank you. Well you've changed my life for the better too and I know you are impacting so many people's lives with your work. Certainly working with people in your clinic and then with your books and then speaking to physicians and other health practitioners so they can then help their patients and clients. So thank you for the work that you're doing and thanks again for joining us on *The Anxiety Summit Season Four*.

Peter Bongiorno: It's an honor.

Trudy Scott: Thanks everyone for joining us on another great interview on *The Anxiety Summit Season Four*.

Speaker Blog: <http://www.everywomanover29.com/blog/serotonin-anxiety-tryptophan-5-http-medication-tapering>

Dr. Peter Bongiorno, ND, author of *Holistic Therapies for Anxiety and Depression*



Peter Bongiorno, N.D., LAc. is co-director of InnerSource Natural Health and Acupuncture, with two thriving practices in New York. Specializing in emotional and mental health, Dr. Bongiorno researched at the NIH's National Institute of Mental Health in the department of Clinical Neuroendocrinology, and Yale's department of pharmacology before training at Bastyr University in naturopathic medicine and acupuncture. He is president of the NY Association of Naturopathic Physicians.

A major contributor to the "Textbook of Natural Medicine" (Elsevier), in 2010 he authored "Healing Depression" (CCNM press) the first comprehensive textbook designed to teach physicians the science and art of natural medicine for mood support.

His first public book in 2010 was "How Come They're Happy and I'm Not," (Red Wheel / Conari Press), which he followed in march 2015 with the professional guide "Holistic Solutions for Anxiety And Depression" (Norton).

His latest work is "Put Anxiety Behind You: The Complete Drug Free Program" (Red Wheel/Conari), which has helped thousands heal their fear.

He also contributed a chapter to "Integrative therapies for Depression" edited by James Greenblatt and Kelly Brogan.

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Trudy Scott, CN, host of The Anxiety Summit, Food Mood expert and author of *The Antianxiety Food Solution*



Food Mood Expert Trudy Scott is a certified nutritionist on a mission to educate and empower anxious individuals worldwide about natural solutions for anxiety, stress and emotional eating. Trudy serves as a catalyst in bringing about life enhancing transformations that start with the healing powers of eating real whole food, using individually targeted supplementation and making simple lifestyle changes. She works primarily with women but the information she offers works equally well for men and children.

Trudy also presents nationally to nutrition and mental health professionals on food and mood, sharing all the recent research and how-to steps so they too can educate and empower their clients and patients.

Trudy is past president of the National Association of Nutrition Professionals. She was recipient of the 2012 Impact Award and currently serves as a Special Advisor to the Board of Directors. Trudy is a member of Alliance for Addiction Solutions and Anxiety and Depression Association of America. She was a nominee for the 2015 Scattergood Innovation Award and is a faculty advisor at Hawthorn University.

Trudy is the author of *The Antianxiety Food Solution: How the Foods You Eat Can Help You Calm Your Anxious Mind, Improve Your Mood and End Cravings* (New Harbinger 2011). She is also the host of the wildly popular *Anxiety Summit*, a virtual event where she interviews experts on nutritional solutions for anxiety.

Trudy is passionate about sharing the powerful food mood connection because she experienced the results first-hand, finding complete resolution of her anxiety and panic attacks.

The information provided in The Anxiety Summit via the interviews, the blog posts, the website, the audio files and transcripts, the comments and all other means is for informational and educational purposes only and is not intended as a substitute for advice from your physician or other health care professional. You should consult with a healthcare professional before starting any diet, exercise, or supplementation program, before taking or stopping any medication, or if you have or suspect you may have a health problem.