

# Anxiety: The Stressed and Toxic Gut

- An overview of leaky gut, the causes and the 5 gut types
- Symptoms of the stressed gut and how it impacts the adrenals
- Leaky gut and glutamine as a fuel source
- Healing licorice root, rhodiola and ashwaganda
- How the frankincense fights inflammation and protects the tight junctions of the gut
- Signs of a toxic gut, soil-based organisms and what we can learn from the Yanomami tribe



*Trudy Scott:* Welcome to Season 4 of *The Anxiety Summit*. I'm your host, Trudy Scott, food mood expert, certified nutritionist, and author of *The Antianxiety Food Solution*. Today our topic is "Anxiety, the Stressed and Toxic Gut" and Dr. Josh Axe is the perfect expert to present on this topic. Welcome Dr. Axe.

*Dr. Josh Axe:* Hey. Thanks for having me Trudy.

*Trudy Scott:* Good to have you here again. I'll read your bio and then we will get right into this topic. I know it's going to be a very interesting one and we've got some interesting discussions to have.

Dr. Josh Axe DNM, DC, CNS is a doctor of natural medicine, nutritionist and author of the book *Eat Dirt*. Why Leaky Gut May Be the Root Cause of Your Health Problems and 5 Surprising Steps to Cure It.

He has a passion to help people get well using food as medicine and operates one of the world's largest natural health website at DrAxe.com. Dr. Axe has been a physician for many professional athletes; in 2009 he began working on the Wellness Advisory Council and traveled to the 2012 games in London to you work with USA athletes. Dr. Axe is an expert in herbal medicine, nutrition, digestive health and athletic performance. He's been featured on many TV shows and stations including The Dr. Oz show, CBS and NBC. In his spare time Dr. Axe competes in triathlons and cross trains with his wife Chelsea who is also a health nut. That's great that you can both be health nuts together.

*Dr. Josh Axe:* It is great. We love it.

*Trudy Scott:* Great. So Anxiety and the Toxic Gut. And I'd like to just start with a quick recap on leaky gut. Your book launched in March and we had a great interview and we talked about how you got into natural medicine, what leaky gut is, what causes it and we talked about the five gut types and some foods and lifestyle changes and supplements that we could actually implement. And we're going to make that interview available for everyone who signs up for the summit so that will give you a background and a good foundation for what we're going to talk about today. But before we get started I'd like to just give a recap of the five gut types and then we're going to take a deeper dive into one particular gut type, which is the stressed gut. So could you just give us a quick recap of those five gut types and then we'll get going into the more detail that we need to talk about today?

*Dr. Josh Axe:* Yeah. Absolutely. Well, the five gut types are toxic gut type, candida gut type, gastric gut type and stressed gut type and so those are the five types. And specifically they all relate to digestive diseases, or not just digestive disease just disease in general and Chinese medicine and what I found in clinical practice. And I found every single person is one of five gut types, and has one of five sort of health pathways. One of the questions I had, even early on in my health training was why does somebody comes down with heart disease and another person this and another person cancer and another person diabetes, why is that? And Chinese medicine really has an answer: it's because certain emotions we experience makes certain organs more susceptible in certain ways. And so we'll talk about toxic gut type and many of these others like stressed gut type and how those are affected by certain organs more than others. But a lot of these stem from the condition leaky gut, which basically, just as sort of to open us up

here, leaky gut is where we get these microscopic holes in our gut lining.

So imagine your intestines as a net or your gut lining is a net and it's sort of the barrier in between your intestines and blood stream. If that little net, if those little holes get tears in them then things that are too large start passing into your bloodstream such as undigested food particles such as gluten, toxins, bad bacteria. When those get into the bloodstream that sets off an immune response in the body and really causes system wide inflammation. And just to let you know, I want to go over some of the biggest warning signs that someone has leaky gut, which you'll see these were often times anxiety and toxicity and other issues, but bloating and gas are big warning signs that you have leaky gut. Any type of food sensitivity, if you don't tolerate certain foods like gluten that probably means you have leaky gut. Thyroid conditions such as Hashimoto's thyroiditis, adrenal fatigue, joint pain, headaches, skin issues like rosacea, acne, eczema, psoriasis, digestive problems of any sort. And then even especially depression and anxiety, any of these issues, bipolar, those are all warning signs that somebody has leaky gut and so a lot of people today Trudy they're going out and they're going to their doctors and they're maybe prescribed a pill for their anxiety, but the anxiety actually has a different root cause.

Anxiety doesn't necessarily always start in the brain, sometimes it might start in the gut. And there are great books on this. My book *Eat Dirt* covers it in great detail. A friend of mine, Dr. David Perlmutter who wrote *Grain Brain* talks about this connection between the brain and the gut axis as well. So we know that really leaky gut is the root cause, Hippocrates over 2000 years ago said, "All disease begins in the gut." And so again, if you're having anxiety issues we really believe that if it's a dietary issue, per se, the majority of time it starts there in the gut lining.

*Trudy Scott:*

And I'm glad you talked about how different organs are more susceptible, specifically when you're talking about the stressed gut. We're getting effects on our adrenal glands and our thyroid, you mentioned thyroid conditions and we get hormone imbalances. So that in this particular instance it's affecting those particular organs correct?

*Dr. Josh Axe:*

Yeah. When we're talking about a stressed gut type we're talking about imagine sort of the lower region around the reproductive system, the kidneys and the adrenal gland is a big part of stressed gut. And then actually even below that if we're looking at some of

the male and female organs that are responsible for reproductive health such as the ovaries and uterus and male testes and some of these other areas, these are all related to the stressed gut.

And I'll give you an example here of how this works. In Chinese medicine we know that the emotion of fear affects your kidneys. So have you ever heard of somebody being so scared they peed themselves? Well, the reason that happens is that organ it literally shuts down. It shuts down, doesn't work right when you have the emotion of fear. And a lot of us don't necessarily have the fear we would think of in terms of being frightened from a scary movie or a horror movie, but a lot of us are fearful that someone may not like us. A lot of us are fearful that we're going to go into debt. We're fearful that people don't like us enough; we need more approval. I mean there are a lot of different types of fear and shame that people experience that are all related to stressed gut. And not only just affects your kidneys, it also affects your adrenals, it affects your hormones, starting with the female and the male organs as well.

So if you're experiencing a lot of fear is the emotion, again, anyone comes into confrontation, let's say something bad is about to happen to you, do you respond with fear? Do you respond with frustration or anger? Do you respond with anxiety? And actually anxiety relates more to, and sometimes to worry or what we call Candida gut is another one there that can be affected too. So I'll just go through a few more. If you think about this, in Chinese medicine if you deal with frustration in patience and anger, I know that's the ideal most with frustration and patience. Like I'm in a traffic jam or I get frustrated because things aren't getting done fast enough, like that's the emotion that I experience when I come into confrontation. And so I fall more in line with the toxic gut type because in Chinese medicine impatience, frustration and anger affect the liver specifically, so the liver and part of your nerve system. Now think about this how that's true in real life today, if somebody drinks a lot they become an alcoholic; how do they tend to respond? Well, they tend to respond with outbursts of anger. And so we see that and also when you get angry it affects the liver or if your liver is toxic it causes you to be angry, and the same thing goes for every gut type is they're related to a specific emotion we experience such as anxiety, worry, frustration, fear and that's going to cause that organs to shut down.

*Trudy Scott:*

It's interesting hearing these connections to our emotions. We don't often think of this and it's very interesting that you've tied this all together.

*Dr. Josh Axe:*

Yeah. Trudy, I've spent a lot of time in practice taking care of patients and the thing I noticed was I would put patients on specific diets and I saw great results. Some people just completely got better, but I would run into I would say 80 percent of people. But then I have this 20 percent of people they were more of those tough cases. So you get 20 percent or let's say you get 18 percent that are just tough cases and two percent you're like this seems really tough. But I started finding that not everyone is the same. I mean everybody's going to do better with more vegetables, right? More veggies, more fruit, eating less of the processed junk food, changing their mindset. But everybody's different. Everybody's wired differently. And I found in my clinic people need a personalized customized approach and that's when I really started digging into Chinese medicine.

I actually had some of my own health issues struggling with leaky gut. I lived in a moldy home for a while in Florida that I didn't know had black mold throughout it. That started me having some health problems. And so I started needing to find a health solution for myself as well as some of my tougher case patients. And as I started digging into it I saw an acupuncture, it's actually an Israeli man who was a master acupuncturist and herbal therapist, I went and met with him and started reading some of the books and really digging into Chinese medicine and I started learning all of these different principles that are really absent in Western medicine today. Western medicine says take a pill. They say it's all in your head. And Chinese medicine and Eastern medicine says well actually most of it is in your head. A lot of emotional things or mental things are actually what are causing your organs to malfunction in the first place.

*Trudy Scott:*

So interesting. Wow. Very cool that you've tied this all together. So you talked about the fact that the root cause of these gut types is leaky gut. So I'd like to go into glutamine. We hear a lot about glutamine. We hear how beneficial it is for leaky gut. And there's a lot of research actually supporting the benefits so tell us a little bit about why it's so great and why you like it and how quickly you see results.

*Dr. Josh Axe:*

Sure. L-glutamine is an amino acid that many of us are lacking in our diet. And it's so important because it's actually the fuel for cells within your intestines. And your intestines also need it to rebuild and repair; in certain cases it can even act as almost a Band-Aid or a protection for your digestive tract. And so for that reason glutamine is so beneficial. Now, a lot of people are taking

just glutamine powder. I don't think it's the best. I think in taking glutamine there's a form called L-alanylglutamine that's better than L-glutamine because it's more absorbable. Your body recognizes it as more of a food. But in reality actually the best form of glutamine you can get is in bone broth, whether it's collagen or beef bone broth. And there's actually a new product coming out it's called bone broth protein powder, but I think the ideal way to get glutamine is in bone broth protein powder, which is a food-based version of it.

But I mean glutamine you can look it up online. In fact I've got a great article on glutamine and how it supports metabolism, weight loss as well as repairing the digestive tract. If you just go to Dr. Axe glutamine or Dr. Axe L-glutamine online you'll see my article on all the benefits there. The big thing with glutamine is, again, imagine your intestines have a tear or a hole in them, imagine it's kind of like you're building a house there's a big hole in the wall, glutamine is part of that repair substance that's used to patch that damaged area.

*Trudy Scott:*

And it also helps with the immune response too doesn't it?

*Dr. Josh Axe:*

Yeah. It helps with the immune response because when you think about this, and we've all heard this quote, but 70 to 80 percent of your immune system is located in your gut, it's so important. When you think about that, if you've got a hole in your gut lining your immune system is obviously compromised. Also, these probiotics, which are a big part of your immune system and regulate a lot of your immunity are located there as well, but a lot of the health of those can be due to your gut lining as well. So I would just say in general yes glutamine is definitely there are many studies showing it helps with your immune system because, again, 70 percent of your immune system is located in your gut.

And this really is a good point as well as we talk about things like anxiety, 95 percent of the body's serotonin, that's your good mood hormone, if you're out on a run and you get that runner's high you've just worked out and you get that euphoric feeling, that's serotonin, those good mood hormones that are released. And so that starts in your gut lining as well and so if you have leaky gut that's why it can cause anxiety. So glutamine can help with your mood, it can help with depression, anxiety, a number of mental issues as well.

*Trudy Scott:*

Excellent. So going back to what you said about using bone broth verses using a supplement, is there a place to use glutamine as a



supplement if someone couldn't tolerate bone broth or didn't have the time to make it? And I'd also like to go back to the comment about bone broth protein powder, because that sounds pretty interesting. But is there a place for supplementation?

*Dr. Josh Axe:*

Oh yeah. Absolutely. L-glutamine if you were going to buy it, just in its powder form, look for alanylglutamine. You can sometimes find it in leaky gut support supplements. But yeah I would say alanylglutamine or bioavailable glutamine. But yeah, you typically you do five grams twice daily. So five grams twice daily of glutamine is more of what's known as the therapeutic dose.

And with bone broth protein powder, that's bone broth in powder form. I know for myself I make a lot of bone broth at home, but it can be really time consuming. Most of the time when I cook my bone broth it's over a 24 to 48 hour period so that's a long period of time. And so when I can't do the liquid or make it to myself I order it in the powder form, which actually tends to cost less than buying it in the bag. Those bags today you can buy them at certain health food stores or online and they can ship bone broth liquid form to your house, but I found that it probably is two to three times more cost-effective to buy just bone broth protein powder. And bone broth protein powder is high in L-glutamine; it's high in proline, which helps heal the gut; it's also high in glucosamine chondroitin; hyaluronic acid; potassium, a lot of different nutrients, which all support gut health.

*Trudy Scott:*

Very interesting. And it's stable?

*Dr. Josh Axe:*

Yeah. The other unique thing about it is it's lower in glutamate, which some people have an issue with. Not many people do but if somebody has a very severe form of a leaky gut sometimes they can have issue with that, but it's actually low in that so it's good there as well. Where if somebody wouldn't respond well to bone broth they may be better to do a stock, like a chicken stock, this is actually more towards that nature. But there's a brand it's called Ancient Nutrition, a bone broth protein they just are releasing it around May 1st of this year, but it's bone broth protein powder by Ancient Nutrition is the company.

*Trudy Scott:*

Great. Thanks for sharing that. That's interesting. And the other issue you talked about related to some people have an issue with glutamate, some people have an issue with histamine in bone broth so I'm wondering if since it's lower in glutamate it may be lower in histamine as well?

- Dr. Josh Axe:* Having that type of response, yeah. So what they found is that when bones are cooked for a long period of time, especially let's say a beef bone broth that's done for 48 to 72 hours, that continues to create more histamine and more glutamate versus if you do a chicken stock, chicken stock is when you put a turkey in the oven over Thanksgiving and you pull it out and there's those juices at the bottom, that's stock and that's much lower in histamine and glutamate and some of those things that some people have a response to. And so this is often times more similar to that to where it's definitely lower in glutamate because I've actually seen the testing on that brand.
- Trudy Scott:* Okay. Got it. That's good to know. For people who may not know what you're talking about when you say you make a bone broth for 24 hours, give us a little recap on what that looks like.
- Dr. Josh Axe:* Bone broth is the essential ingredient in chicken soup. It's been consumed for 6000 or so years. It's been consumed a really long time. People have been throwing a number of things in a pot. So early on in history people would go and they'd have a single pot and they would put in let's say chicken meat and they would put in vegetables and things like that and they would cook it and sometimes they'd put in a whole chicken, but sometimes afterwards, after everything was done cooking they'd pull it out, they'd take the ligaments and the bones and the tissues or these extra animal parts such as the feet, like chicken feet, which you're not going to eat, but they would just throw chicken feet or beef bones in a pot and just cook it in water. And what happens is certain amino acids and minerals and nutrients seep out into the liquid, which is what chicken broth is. Again, it's throwing chicken feet and chicken backs and those types of things or cartilage, letting it simmer over a course of 12 to 48 hours that's going to release all those nutrients that are really healing to the gut.
- I remember as a kid Trudy, my mom always gave me chicken noodle soup and ginger ale when I was sick. Now, I probably stayed sick another two weeks because of all of the MSG and white flour noodles and sodium that were in the chicken soup, and then, of course, the ginger ale was made of high-fructose corn syrup; it was essentially soda with ginger flavoring, but it's like where did my mom get that? Well, my mom got that because her grandmother, whenever she was sick, made her real chicken bone broth soup with real chicken broth along with a bunch of veggies and chicken and then she actually made her a ginger tea or should put ginger in the broth as well. Today in our modern society we cut all the corners and said rather than taking the time to make an



actual meal and making this healing food we're going to buy the thing in the can and the other thing in the can, the soda. So anyway, that's essentially how things have evolved over time.

*Trudy Scott:* Great. So you're talking about chicken here and the chicken feet and the chicken bones, what about beef broth, is that good as well?

*Dr. Josh Axe:* Yeah. Beef broth is also fantastic. Now, there are different forms of collagen in each. And in chicken broth you're going to find larger amounts of type II collagen, which is fantastic, especially for the gut and the immune system and for inflammation and joints. Whereas in beef broth you're going to find higher levels of type I and III collagen, which are most beneficial for the skin, hair and nails and the bones. Okay, so skin, hair and nail, bones and heart like your blood vessels and tissues. And there's a little bit of overlap, but really they definitely have some different benefits between the beef broth and the chicken broth, but they're both wonderful.

*Trudy Scott:* Great. And the beef is obviously going to be even longer to cook.

*Dr. Josh Axe:* Yeah. Typically the broth, where chicken broth is recommended 24 hours, beef broth they typically recommend doubling the time so a total of 48 hours.

*Trudy Scott:* What do you think about using a slow cooker to do this?

*Dr. Josh Axe:* Well, I mean that's about all I use Trudy. Now sometimes if I get a big load of chicken feet I will do a pot on our stove, but I would say 80 percent of the time when I'm making a broth at home I'm using the crockpot or the slow cooker. That's usually what I use. And the reason I started using that was because I started using all in one pot at once and the one time I left it on too high and almost burned my kitchen down. So the crockpot is a lot more safe, especially for somebody just getting started.

*Trudy Scott:* Do you have a favorite one that you recommend?

*Dr. Josh Axe:* I just bought my mom for Christmas one that I think she really likes. It might be a Cuisinart. And then I think my wife and I also got a smaller one, we have two and our house; we've got sort of a bigger one, but then we also got one that's a pressure cooker. By the way, this thing is just awesome. You can also pressure cook it rather than slow cook, but I believe it's a Breville.

- Trudy Scott:* Okay. Have you heard of any concerns about lead in some of the crockpots or being concerned about some of the materials used in some of the crockpots? I'm familiar with the Vitaclay slow cooker and looked into it when I was researching crockpots and there was some pretty scary things out of there. Anything that you've heard?
- Dr. Josh Axe:* I haven't read a whole lot on that. There's a crockpot that I was really excited about because it was so large. It was seven or eight quarts, it was a bigger one, but I didn't buy it because it had an aluminum inserts and I wasn't as comfortable with aluminum as I was with iron or doing one that had a cast-iron insert. So in general I bought the cast iron insert. And the brand I have actually it's Breville. So if you go to Amazon.com and look up Breville pressure cooker you should see it on there the brand that I have. It's called the Breville Fast Slow Pro. It's a stainless steel. But the great thing of that is you can pressure cook chicken on the bone and it's done in an hour and a half like you put in the crockpot for ten hours. So it's a pretty good investment there. I like that one. But it's smaller; it's not going to be as big as some of the other crockpots per se.
- Trudy Scott:* Okay. And then definitely we want to avoid the aluminum so going for cast-iron or stainless steel would be a better option whatever you're looking at.
- Dr. Josh Axe:* Yup. Absolutely.
- Trudy Scott:* Then I've got a following question about pressure cooking. Because at one stage I thought all this was really great and it's handy and it's quick and it's convenient and you can make a meal pretty quickly and then I saw some concerns about the high temperature possibly destroying some of the nutrients, have you looked into any of that at all?
- Dr. Josh Axe:* Well, I have and it's not something that I'm particularly concerned with. And the reason being, things can be heated and typically they will lose some nutrients, but the nutrients become more available. I mean that's the thing, and I'll give you an example: in ancient Chinese medicine they typically recommend when you have digestive issues when you're doing a rice they recommend something with the congee, rice congee or oatmeal congee. And so they'll cook the rice for ten to 12 hours. I don't do a lot of grains but I do some short grain sprouted brown rice as well as some sprouted oats and then I slow cook it in my crock pot or my pressure cooker. But I cook these for long periods of time. I really make sure they're really well cooked and broken down. But no,

that's not something I'm really too concerned with in most cases. I think a lot of times when you're heating something for a prolonged period of time you absolutely can lose some nutrients. But also most the time they become more bioavailable. And this is true, if you look at tomatoes, for instance, they found that there's more lycopene and more nutrients in a tomato when it's raw, more enzymes, there's a more lot of this stuff. But as you cook it longer it loses some of it but also it becomes easier to digest. And so a study saying it has less when it's cooked higher versus more, that doesn't surprise me at all. I think that's common sense. But it wouldn't deter me.

*Trudy Scott:* Okay. Good to hear, really good to hear. And then one follow on question about the glutamine, you mention this particular form and I just wanted to spell it because it's unusual, alanylglutamine. Now that is not as available as just L-glutamine so would L-glutamine suffice if someone was going to supplement?

*Dr. Josh Axe:* Yeah. Absolutely. I think glutamine is great. For most people that are going out to buy it I would say first option bone broth proteins, second option. Just buy a good quality glutamine powder. I mean it's pretty much the same across all brands for the most part with glutamine today. So five grams two times daily is where I would start.

*Trudy Scott:* Okay. And then with all of these the bone broth and then the L-glutamine or the other glutamine, how quickly do you see results with people? Obviously it differs between different individuals and what's going on and what the trigger is that's causing the leaking gut in the first place, but what could we expect in a best case scenario and what could be the worst case scenario in terms of how quickly we could see improvements?

*Dr. Josh Axe:* I think people will tend to see improvements very quickly, especially when there's a full on dietary change involved. I've actually got a book that just came out it's called Bone Broth Breakthrough and in this book I really go through how to do a three day bone broth cleanse, how to do a seven day bone broth challenge and then a 30 day bone broth diet. So I have a program in the book and I found when people start getting rid of a lot of the junk in their diet and start adding in things that are high in glutamine and these amino acids and these foods that typically in three days people can notice a very big difference, but a lot of times within 30 days they can feel like a totally a completely different person. What I love to see my patients do Trudy a lot of times I'll put them on this three day cleanse, bone broth cleanse,

and then for the next 27 days follow the diet. And by doing that the results are transformational.

*Trudy Scott:* Wonderful. Now this Bone Broth Breakthrough, is it a book you've written?

*Dr. Josh Axe:* It is. It's a book that I've written. People can go to Amazon.com. So yeah.

*Trudy Scott:* Great. I'll make sure to include a link to that as well so folks can check it out. That's fantastic. Very encouraging. Now, there are a few other things we can talk about when it comes to healing the leaky gut and you talk about licorice root being especially beneficial with leaky gut when there's this emotional stress going on. Can you tell us a little bit more about licorice?

*Dr. Josh Axe:* Sure. Licorice root is another one of those herbs that's used in Chinese medicine and it's very effective for many things, but one actually there is studies showing it helps the stomach, it actually helps with ulcers specifically. There's other studies showing that it actually helps with soothing the intestinal tract. But for the most part it's also used as an adaptogenic herb. Many of us have heard of adaptogens such as ashwagandah, rhodiola, ginseng, certain mushrooms such as cordyceps have been labeled adaptogenic, well licorice root works in the same way. It really helps your body better adapt and deal with stress. We know stress can be very, very hard on the intestines as well as the stomach. It can be very hard on your digestive system. So licorice root is pretty amazing. It's an herb that really helps in sort of soothing inflammation, but it also works as an adaptogen to lower stress levels, which is harming the gut. So really as a two pronged approach and why it's so effective at both helping the digestive system as well as supporting the adrenal glands, thyroid and overall hormones.

*Trudy Scott:* Great. And we want to be clear here that this is a herb or erb that we're talking about, not the candy. I remember when I first started working as a nutritionist I mentioned licorice root and this client of mine said "I love licorice". I said no it's not the candy it's the herb.

*Dr. Josh Axe:* You're exactly right. I will say this as a kid my favorite candy growing up was licorice. I loved it. But the good news is that you can actually make your own homemade things with licorice. I use fennel sometimes too as a similar flavor. But I want to mention a great study too. There was a study published in the Journal of Molecular and Cellular Endocrinology and they actually found that

licorice root helps your body more effectively balance out cortisol levels, which is a stress hormone that can cause issues with the adrenal gland and cause you to actually age faster. So licorice root is very, very effective at really helping balance out the stress hormones as a well, according to several studies.

*Trudy Scott:* Fabulous. And I'll make sure to link to that study as well for folks who want to look at the research. And going back to the fact that you said you liked licorice. I've always loved licorice. I love licorice tea. And it does have a pleasant taste so certainly if you're going to do something that's in tea form you are going to get that nice licorice taste and I liked that you mentioned fennel as well because I think that's got a delicious taste as well. Very, very nice.

*Dr. Josh Axe:* Yeah. Actually this morning for breakfast I had some salmon along with a carrot fennel soup that was just delicious.

*Trudy Scott:* Sounds lovely. Kind of back to what we were talking about when we were talking about those broths. So now you've got this beautiful broth you would take that broth as a base for making a soup like you've just talked about or you could just drink it as is, correct?

*Dr. Josh Axe:* Yeah. Exactly. So what I did is I had chicken broth and basically this time, a lot of time I do it in a slow cooker but this time I had chicken broth; I had steamed about three parts carrots, a fourth part fennel and I just through that actually in a blender, in a Vitamix and I put in just a little bit of a sprinkle of cinnamon and ginger and a little sea salt and that was my soup for breakfast.

*Trudy Scott:* Sounds good. I love ginger as well. It's great. And ginger is so great for the digestion. What a great breakfast. There was something else I was going to ask about licorice, one other question about licorice. There also some cautions of licorice if someone has high blood pressure, tell us a little about that.

*Dr. Josh Axe:* Right. Well, there's different types of licorice out of there. There's something called the DGL, which is deglycyrrhizinated licorice as well as regular licorice root. And so sometimes if you're doing the regular licorice root there's something called DGL licorice, that's what you want to be looking for is DGL licorice. It's not going to affect your blood pressure in the same way because I believe that part of the plant has been removed that can sometimes affect blood pressure. So again, you're going to look for DGL licorice root if you're concerned with blood pressure like issues.

- Trudy Scott:* Great. And there are DGL chewables that are very effective for healing and these taste good as well. Now the question I've got about DGL, does that still have the adapteogenic properties of regular licorice?
- Dr. Josh Axe:* Part of the properties of what's removed there may not have as many of those benefits. Now, I still believe even without it it does work as an adaptogen. But yes, some of the DGL have some of the adaptogen qualities. So typically what's recommended is if somebody is more looking for an adaptogen herb they just need to take the recommended dosage of licorice root. So if somebody has high blood pressure they typically want to do the DGL. Or if somebody's really just trying to let's say they have an upset stomach or they're looking to support their stomach lining, in that case a lot of times they can do the DGL. But if somebody is looking for more of an adaptogen supplement or that reason to use it, most of the time in that case licorice root is used but it's typically as a combination formula and used other adaptogens such as astragalus or rhodiola or that type of thing.
- Trudy Scott:* Okay. Great. Thanks for that clarification. Now changing direction a little bit, I know you are a big proponent of essential oils and you talk about frankincense being very healing of the digestive system. And was something that I didn't know about until I read your book so tell us a little bit more about frankincense.
- Dr. Josh Axe:* Sure. Well you know frankincense is known as the king of essential oils and part of the reason it's got that label is that it was given to the king of kings by the three Wiseman; it was given to baby Jesus thousands of years ago along with the gold and myrrh. Now frankincense it's been used throughout history as famous, probably the most of famous herb in the Middle East today. It's also one of the most famous herbs in Indian medicine. And so the unique thing about frankincense it's very high in a compound called boswellia or boswellic acid in terms of its root form if you're doing it in powder form. In terms of the oil form, it's high in other compounds that tend to be anti-inflammatory and tend to help balance out different things in the body as well. So frankincense, again, from a powder standpoint, very high in boswellic acid, which is a natural anti-inflammatory. What I oftentimes recommend for patients who are wanting help with inflammation is I will have them do tumeric and frankincense together, which is a really powerful combo. Frankincense's anti-inflammatory properties is one of the things that makes it so beneficial.



*Trudy Scott:* Really very interesting. And there was a 2015 study that you make reference to how boswellia preserves, intestinal epithelial barrier from oxidative and inflammatory damage, which is very powerful. Now would this be in the essential oil form or would this be something that is ingested?

*Dr. Josh Axe:* Well, in that specific study it was looking at boswellia powder I believe. So that's going to be typically in a capsule form. But that's not to say that the oil isn't going to allow people who have many benefits. Again, the oil has been used in religious ceremonies and just throughout history in many different ways. But I think in that specific study it was specifically quoting boswellia powder.

*Trudy Scott:* Okay. So your application for the essential oil, how would you recommend people use it?

*Dr. Josh Axe:* I love using it topically. I recommend taking about two to three drops, mixing it with a little coconut oil or just doing it straight, rubbing it on the neck area just breathing it in. Frankincense is also good for age spots. In fact my wife puts it in her skin moisturizer. She takes frankincense and puts several drops in there every night before she goes to bed and uses it that way. It's good for spiritual awareness. In fact I do it when I'm sort of praying in the morning or reading a scripture and that type of thing. It's used for reducing inflammation for gut health. It's used in a lot of ways, but typically the oil I use topically or I diffuse it in my home. And the unique thing about essential oils is they're so small that you can actually breathe them in and get many benefits, or put them on your skin and they actually get in your bloodstream that way. So it can be in some cases working with somebody practicing functional and natural medicine who knows the usage, you can sometimes take it internally as well. But in most cases it's used aromatically and topically.

*Trudy Scott:* Great. Wonderful. Thank you. And I know we've got a gift to give. You've got a great e-book called King's Medicine Cabinet and it's a complete guide to essential oils, the history, uses, cures and recipes that will transform your health forever. So we'll make sure to include a link to that on the speaker blog so folks can learn more about essential oils and how they can help your health. That's great. Thank you for offering that gift.

*Dr. Josh Axe:* Sure.

- Trudy Scott:* I'd like to change directions again because there's so many fascinating things here. Have we got time to quickly talk about soil based organisms?
- Dr. Josh Axe:* Yeah. Let's talk about SBO's, one of my favorite topics.
- Trudy Scott:* Right. The information that you talk about it in your book on the Yanomami tribe in South America was just fascinating and I think we've got a lot to learn from ancient tribes and how they're doing so well and how we could benefit. So tell us about soil based organisms.
- Dr. Josh Axe:* Sure. Absolutely. Well, I love that study as well. A group of researchers went and studied this tribe in South America, the Yanomami tribe, and they found that they had never taken an antibiotic in their life so Western civilization hadn't ruined them in terms of their health. The other unique thing about them is they did a test, a stool test to look at their bacterial diversity and they found this tribe of people had an average of almost 50 percent more different types of bacteria in their guts from their tribe compared to people in America or other countries such as you Europe and Candida and some of the other countries, I'm sure Australia is very similar. So I would say that that was one of the most amazing things is they had a lot more probiotic diversity in their bodies. So they went and they looked at their diet and they found that they were constantly they ate venison, they ate fish, they ate insects, they ate these sort of plantains on a regular basis. They made a probiotic beverage out of casaba like drink so fermented drink. So they ate this for the most part. But they also noticed that they ate dirt. So, for instance, when they were eating certain vegetables out of the ground, maybe they were brushed off but they ate dirt on a regular basis and they found that that was potentially one of the reasons why they had the diversity they did is they were consuming soil based probiotics, also known as soil based organisms, on a regular basis.
- And a lot of people aren't aware of this but you've got food based probiotics that are found in things like yogurt and sauerkraut today, but also there are soil based probiotic that we should be getting because we should be buying food locally from our farmer's market. I'll give you an example: if you go to your farmer's market and you buy some carrots or beets there there's a little bit of dirt on them. If you bring them home and even wash them off with a little bit of water you'll notice that there's still these sort of brown specs embedded in carrots and beets and even lettuce today. And what those little brown specs are that you're seeing those are soil-based

organisms and medical research is showing those actually help you break down and digest the food you're eating, they also can go throughout your body and kill off bad bacteria and yeast and dangerous micro organisms. And so really it's kind of the missing link of what we're missing for our immune system.

And in my book, *Eat Dirt*, I go through how to heal leaky gut; I go through how to eat dirt. And by the way, eat dirt doesn't necessarily mean you're eating dirt all the time, actually eating raw local honey is a way to eat dirt because raw honey contains local pollen, actually over 200 different types of microbes, which also have benefits for actually boosting your immune system. We've heard things like consuming raw honey can help you actually greatly reduce risk of allergies and asthma, and why is that? It's because if you do raw honey that's local to your region every day for the course of let's say several months and then you come in contact with spring or fall allergies, well your body has had that natural immunization, you've had those micro exposures everyday over time so now when you get the big dose of pollen your body has adapted to it, it's used to it.

So really our immune systems have been impacted because we're not eating locally, we're not eating things from the ground and earth here and so in my book some of the ways I talk about eating dirt includes shopping at your local farmer's market and leaving a little bit of the dirt on your food. I talk about walking barefoot. Having your own garden. Swimming in the ocean. Actually the ocean is the largest source of good viruses known as phages in the world, which can benefit our health. Having a pet, in fact having a dog may boost your immune system by 52 percent in certain ways as well. So again, there's a lot of ways to eat dirt as I teach in my new book *Eat Dirt*, as well as in that book I have a couple quizzes. I go through the five gut types in there and also how to heal leaky gut, the root cause of all disease.

*Trudy Scott:*

Fantastic. And I love all that. Go barefoot; swim in the ocean, I love to swim in the ocean it's just so invigorating and having all these is just wonderful. This is really fantastic. I'm glad you made the clarification about eating dirt and I think it's a great title. It certainly piques people's interest when they read that. And we'll make sure to have the gut quiz available: *Is Your Gut Leaking.com*, we'll have that and we'll have access to your wonderful e-book on essential oils. Any final closing words of wisdom?

*Dr. Josh Axe:* I would just say don't feel like you need to make every change, but make one change today. One of the first things I'd recommend patient to do is to start just changing their breakfast. So you don't even have to change every meal but changing your breakfast, you're still changing a third of your diet so it's a big change. Get some of that bone broth protein powder from Ancient Nutrition; do some coconut milk; a cup of berries. Start doing that for breakfast every day. Switch from your other sweeteners to raw local honey and start with those changes and I think everybody will be on a good course. And if you want to learn some of these tips check out my book *Eat Dirt*. It's at your local Barnes & Noble, it's all on Amazon.com. And just want to say Trudy I'm a big fan of yours, big fan of all the great content you put out and it's just been an honor to be part of your program.

*Trudy Scott:* Well, thanks very much for joining us and make sure that all your information is available for people who want to go further. We'll also provide a link to the book *Eat Dirt, Why Leaky Gut May Be The Root Cause Of Your Health Problems And 5 Surprising Steps To Cure It*. And congratulations. It's your first book I believe.

*Dr. Josh Axe:* Yeah. First published book and done really well. Again, I'd love for everyone to check out. You can go to Amazon and just check some of the reviews there as well to see what other people have to say. Thanks Trudy.

*Trudy Scott:* That's great. Thanks a lot Dr. Axe. Thanks everyone for joining us on another great interview on the Anxiety Summit. Tune in for more great interviews.

Speaker Blog: <http://www.everywomanover29.com/blog/anxiety-stressed-toxic-gut>

**Dr. Josh Axe**, DNM, DC, CNS, author of *Eat Dirt*



Dr. Josh Axe, DNM, DC, CNS is a doctor of natural medicine, nutritionist and author of the new book *Eat Dirt: Why Leaky Gut May Be the Root Cause of Your Health Problems and 5 Surprising Steps to Cure It*.

He has a passion to help people get well using food as medicine and operates one of the world's largest natural health websites at [www.DrAxe.com](http://www.DrAxe.com).

Dr. Axe has been a physician for many professional athletes. In 2009, he began working with the Wellness Advisory Council and traveled to the 2012 Games in London to work with USA athletes. Dr. Axe is an expert in herbal medicine, nutrition, digestive health and athletic performance. He has been featured on many television shows and stations, including the Dr. Oz Show, CBS and NBC.

In his spare time, Dr. Axe competes in triathlons and cross-trains with his wife Chelsea, who is also a health nut.

**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.