



## Anxiety, The Gut-Brain Axis And Gluten Sensitivity

**David Jockers, DNM, DC, MS**  
with **Ivonne Boujaoude, ND, MS, MA,**  
**CFMP, CFSP, CGP**



### **David Jockers, DNM, DC, MS**

Welcome to the reverse brain disorders summit, I'm your host, Dr. David Jockers and I have got a great guest today, this is Dr. Ivonne Boujaoude and we're gonna be talking about anxiety, the gut brain axis and gluten sensitivity and really how gluten can cause problems in the gut, which can drive up inflammation in the body in particular, impact the brain cross through the blood brain barrier and really impact the brain and how anxiety and mental health disorders are really there warning signs that there's inflammation in the brain and they happen before for many, many individuals who struggle with anxiety, clinical depression, things like that when they're younger, when they never really get to the root cause they never address their gut, they never address the factors we're going to talk about. It can ultimately lead to neurodegenerative conditions later in life. And so a little bit about Dr. Boujaoude, Dr. Ivonne is what I call her. She actually works for us at [drjockers.com](https://drjockers.com).

She's a board certified naturopathic doctor certified functional medicine practitioner and an integrative mental health practitioner. She has a masters in psychology and M. S. In health science with a concentration in clinical nutrition and she's a certified gluten free practitioner and she's got just a ton of different certifications and just all around expert and she really has a passion to help people with mental health disorders, You guys can find her on [drjockers.com](https://drjockers.com) and she is one of our great naturopathic health coach is that helps people all over the world virtually works with them virtually works on with people, one I wanted in groups to help them get to the root cause of their health issues and really puts them on functional health plans to get healthy and get well. So with that said, guys, you're gonna really enjoy this show and so let's go right into it. So Dr. Ivonne Boujaoude, Welcome.



**Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Hi Dr. Jockers, I am so excited to be here with you today and this topic is very close to my heart, so I'm ready to share to the world what gluten does to your brain and how it affects your emotions and you know, the reality is when somebody has this issue, it affects their life. So it's good to find out what things you can do to remediate this and just start feeling better.

**David Jockers, DNM, DC, MS**

Yeah, this is really key and we know that anxiety has really gone up in our society. I mean just in the last 20 years it's really skyrocketed. All of us have experienced some level of anxiety. Meanwhile, you know, it's walking the planet has had anxiety at times, but there are people that are crippled by anxiety and it literally runs and drives their life and they don't realize that this could be coming from their gut, it could be coming from the foods that they're eating, You mentioned gluten, we're gonna talk more about that. But what is the difference between the typical anxiety that any individual may experience when they're nervous about something, maybe a presentation or meeting somebody new or whatever it is versus people that are literally crippled by anxiety.

**Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Exactly, and that is a big difference that need, people need to know, so that when they know that difference, they can, you know, search for help and the right help that they need to get over that and like I said, even if I mentioned this to you, but I myself have suffered from clinical anxiety and later on was diagnosed with celiac disease and so I wish I had known that the relationship of gluten sensitivity, even celiac and anxiety because I could have done something. But on a positive note, I am thankful that I suffer from that because that prepared me to study about it and then look into natural medicine and what is even more exciting for me is that now I'm able to relate to my clients and help them.

So that is wonderful. And like you mentioned between the difference between, you know, everyday anxiety and anxiety that is crippling and that would be a clinical anxiety. So, how about if we start by defining what is anxiety? I think that's a good start. So, from a psychological point of view, anxiety is a human emotion that has the purpose. I mean anxiety does have a purpose and it has a purpose to to protect us and motivate us to take action to move us into action. So as soon as we correct that putting us in danger or perceived danger. Our anxiety should dissipate. So from a physiological point of view, anxiety is a type of stress response and it's a function of the autonomic nervous system and the autonomic nervous system has two branches the sympathetic nervous system which is works as an accelerator key, so to speak and the



parasympathetic system. We can think of it as the brakes. So when you experience anxiety or have anxious thoughts, the sympathetic nervous system that is the accelerator is stimulated resulting in increased heart rate, increased breathing, increased blood pressure and then blood flow instead of going to all our organs is going into our limbs so that we can run and like for example when you're anxious your digestion is interrupted and if you think about it that makes sense. You know you want to escape from danger, you don't want to be digesting your food. So once the danger is gone or is or perceived to be gone, your parasympathetic nervous system is also known as rest and digest has a calming effect by bringing your heart rate down and regulating your breathing and so forth. So ensure anxiety is a type of stress response that results in a psychological response when the sympathetic nervous system is stimulated, resulting in a physiological change or changes.

Now this is like super, super important to understand that concept because it is important that we know that anxiety is bio direction is bidirectional, that is emotions or thoughts may cause a stress response resulting in a physiological change or changes and physiological changes of the stress response may cause anxiety so it goes both ways and that is so key to understand. So yeah, so there are many causes of anxiety and like you said, doctor doctors, you know when people are having, you know, a presentation or a test I don't know, they're going on a date, you know, it's normal anxiety, it's a day to day anxiety that is expected for for anxiety to to you know, to occurrence an individual and it's helpful because it motivates you to action and that is really the purpose of anxiety, but for some individuals like you mentioned Dr. Jockers, the sense of anxiety doesn't go away when the danger is gone or the perceived danger is gone and there are times and this is key. There are times when there isn't any danger at all.

And so these individuals are not able to pinpoint why am I anxious? I don't understand. And so that anxiety is anxiety that we're talking about today, they may have a sense of pending impending danger, panic. You know, things like that, even if they know that nothing is going to happen or they're in a safe place. You know, they may also experience heart palpitations, excessive sweating, gastrointestinal symptoms, trouble sleeping and relaxing. So it's like the accelerator is stuck and this anxiety interferes with normal daily living. It affects relationships, it affects everything and this is what we call clinical anxiety. There are different types of anxieties, from phobias to obsessive compulsive disorders too. And you know, many others, but conventional now let me jump into conventional treatment for clinical symptoms of anxiety. Well, typically there are addressed by medication and counseling. However, there are some individuals that are not responsive to therapy or counseling, meaning that despite taking medications or therapy, their anxiety does not resolve. So it comes down to anxiety of, when it



comes down to anxiety or any health conditions, natural medicine and functional medicine recognizes that the best approach is to find the root cause. Typically there are many root causes that create the perfect storm and sometimes they're what I call the driving factor that is implicated in a particular condition. So today I would like to talk about gluten as a driving factor in anxiety and some vulnerable individuals. And I, and I think this is important because I don't want people to come out and just attribute their anxiety exclusively to gluten, but for some vulnerable individuals, this may be a driving factor.

### **David Jockers, DNM, DC, MS**

Yeah. And really, almost any dietary component can play a role because there's this intimate connection between the brain and the gut. In fact they call the gut, the second brain because we produce so many different neurotransmitters. There's such a tie in between what's happening in the brain and you know we've always used the term like hey trust your gut it's like you gotta get a lot of sensory information from your gut that helps you know that that plays a role in what's happening there with your brain.

### **Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Absolutely and you know there are many other factors and but gluten in this case we know that is one of the most inflammatory molecules in food causing a myriad of health conditions and conditions from gastrointestinal neurological endocrine and more and basically any tissue any organ any cyst can be affected by gluten and it depends on what is your weakest link. So how can gluten affect mood. Some people make me wonder how is that possible? How can gluten affect mind and mental health and you alluded to that connection. So let's dive into it. So at first glance it seems like impossible or not possible. How can a sandwich or a bowl of pasta cause anxiety to anyone? The logical thing would be to have an upset stomach or anything digestive, right? Yeah for sure.

### **David Jockers, DNM, DC, MS**

And some people you know obviously they develop celiac they develop for some people they develop irritable bowel syndrome. They develop gas bloating, constipation inflammatory bowel syndrome celiac of course when they're consuming gluten throughout their life and they're creating this inflammatory storm but there's also non celiac gluten sensitivity N. C. G. S. That's very common. And brain issues are really really commonly associated as one of the symptoms where these people they don't experience gut issues but they experience other symptoms associated with chronic inflammation from the gluten that they're consuming.



**Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Absolutely. And we're going to get to that connection. So like we said you know most people have gastrointestinal symptoms like the symptoms that you mention. And yet there's another condition like you mentioned the gluten sensitivity or non gluten celiac gluten sensitivity. And when you survey the literature you will find and this is so interesting that 60 to 80% of the symptoms associated with gluten sensitivity are neurological in nature? I mean that is huge and symptoms such as brain fog, epilepsy, ataxia, headaches, dizziness, numbness and neuropathy. Just to name a few are some of the neurological symptoms that are associated with gluten sensitivity That is not celiac that is huge. So in addition to this there are a wide range of psychiatric symptoms and disorders associated with celiac disease and gluten sensitivity like anxiety, depression, psychosis, bipolar disease? OCD, ADD, Etcetera.

So what is so interesting that many individuals that suffer from the symptoms and conditions did not know that they have an underlying gluten sensitivity or celiac disease until they eliminated gluten from their diet or underwear testing. So there's that connection again with people that have that sensitivity and celiac. Now how about we talk about the brain gut access and anxiety to put it all together. This is going to help us understand how gluten may cause anxiety for some individuals and understanding this relationship between the brain and the gut is how it impacts the function and especially important to know this so that we can and do something about it. So okay, so let's say that you experience this all the time and we all experience this all the time, that many people probably don't know that there's even a scientific label to this for this relationship between the brain and the gut and the gut and the brain now notice it's a bidirectional relationship.

And back when I started, I said that anxiety has a bio directional relationship. So let's say that you received some, you're getting ready to receive news about whether you've got a job or you, the sale of your house is you know you're waiting and you're anticipating as you're anticipating that phone call, you may feel butterflies in your stomach or let's say that you're you just got news about your best friend that got injured in a terrible car accident and you feel a pit in your stomach. Can you see that by direction? So now let's say that you have diarrhea after eating at a restaurant and you get up and you feel kind of dizzy, you know after going to the bathroom and you're not feeling good or maybe you develop constipation and you started getting headaches. So again these are examples of the gut brain access as you see the gut and the brain communicate and this communication is through the vagus nerve that runs through the brain to the gut.





### **David Jockers, DNM, DC, MS**

Vagus is Latin for wanderer and it runs, yeah it's amazing how it runs from the brain stem goes into the heart, lungs, goes into the digestive system and it's your main parasympathetic branch so it helps activate the production of stomach acid, bio flow, pancreatic enzymes. So you can optimize your digestion. And it's also a sensory component that's bringing a lot of feedback back up into the brain like you were talking about. So when there's higher levels of inflammation that are taking place in the gut, higher pathogen load than it's sending information back up as well to the brain saying, you know what there's problems down here.

### **Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Exactly, exactly. So for example, I'm sorry this example show the relationship between the gut and the brain that is bidirectional and this affects the gut and the brain. And this is through the signaling done from the gut microbiota or the flora to the brain and from the brain to the gut microbiota by means of neural endocrine and immune. So anyway there's a reason why mental health brain function and digestion are intimately related and as you were mentioning the vagus nerves, the vagus nerve is very important with your parasympathetic nervous system and that it makes sense because if you're in a state of stress, you don't release those important enzymes and all that good stuff to digest. Um, and many of course are familiar with, I cannot digest my food because I'm so stressed. But anyway, going on. So, and you mentioned in talking about the inflammatory component of gluten and other things that can inflame your gut. And I'm sure many of you are familiar with the saying, gut on, gut on fire, brain on fire. So right, in other words, if we have inflammation in your gut, your brain will also be inflamed.

And again, that's through that communication. And if you have poor brain function, your digestive function will suffer as your brain controls motility and sign production and digesting function in general. And this is very important because many of us concentrate only on the gut for digestion, but our brain is also connected with our digestive function. Now it is interesting to mention that with this connection between the gut and the brain, there's also other side effects when our brain is injured like brain injury, it also affects our gut. And guess what? A lot of people that have brain injury, like a concussion, have a high risk of developing anxiety and other mood disorders or any other, you know, psychiatric conditions. So let's get into gluten and anxiety. So starting with what is gluten Now, gluten is a molecule found in wheat rye, barley spelled and technically oats don't have gluten because you know the, the bat gluten but because they tend to be cross contaminated through farming and also when processing facilities, oats can be have the bat gluten. So if you eat oats, just as a side note, make sure that



that they're labeled gluten free, that is important there certified gluten free. So gluten is what makes bread elastic and sticky and actually gluten is made of many, many different proteins and peptides such as gliadin and glutenin. And it also has other non gluten molecules that may affect some vulnerable individuals. So you don't have to be sensitive to all the molecules that are part of fractions of gluten. Only one is enough for you to be sensitive and have symptoms. That is very important to know. And we'll get into more detail in a little bit. So we have seen an increase of celiac disease and gluten sensitivity in the past 50 years. The Mayo Clinic study published in 2009 says that there has been an increase of celiac disease four times in the last 50 years. Yeah, four times in the last 50 years. And it also has been reported that people who did not know that they have celiac disease were four times more likely to die during the 45 year follow up.

That is pretty scary to me. So, the general population, sadly, and most health practitioners believe that gluten is only a problem with celiac disease that is for those who have a genetic predisposition or that gluten sensitivity is only manifested in the gut. Some of you know, celiac is a genetic And it's only about 1% of the population that causes this immune reaction to gluten that produces inflammation in the small intestines and this will and it damages the villi in the small intestines. Now the villi are finger like projections that increase the surface of the intestines for nutrient absorption, but there's another distinct condition like you mentioned earlier, celiac called gluten sensitivity or non celiac gluten sensitivity. non celiac gluten sensitivity and its prevalence. Now, this is so interesting, its prevalence is six times more than celiac disease.

### **David Jockers, DNM, DC, MS**

So more people are having this non celiac gluten sensitivity, which they tend to have more neurological based symptoms than the people that are actually getting to the point where they have celiac, celiac is kind of a late stage diagnosis because the villi, those little pockets and the intestines are fully destroyed by the time the celiac diagnosis is given. Right? So the person could have a lot of symptoms or just, you know, malabsorption and a lot of different digestive struggles before they're given that diagnosis. But then, you know, for the amount of people getting diagnosed, what you're saying is that these are the individuals that are dealing with non celiac gluten sensitivity. Six times the amount.

### **Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Right. And you know what is for those of us that have symptoms in their digestive system, You were kind of blessed because we can make that connection. It's a little easier.



**David Jockers, DNM, DC, MS**

True, little easier to connect when you're having digestive symptoms. Often times people think about what they ate, right? As opposed to anxiety, depression, brain fog irritability. Most people are not connecting that to food that they ate. Their, connecting it more to circumstance. This is or you know, whatever it is, like going on in their life, which it could be obviously plays a factor in it, but we know that the diet and what's happening in the gut plays a huge role as well.

**Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Yeah, exactly. So, both celiac and gluten sensitivity may present with neurological and psychiatric complains. Now, this is interesting as their main symptom, what is most interesting is that 35% of newly diagnosed celiac disease had no diarrhea or digestive symptoms, dispelling the myth that diarrhea must be present to diagnose celiac disease. That is really interesting that people that...

**David Jockers, DNM, DC, MS**

35% of people with celiac did not have digestive symptoms, not just Right.

**Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Right. So, yeah, so, now, examples, again, of neurological complaints that these individuals may have in many individuals in general that have a gluten sensitivity can be things like headache, brain thought numbness, migraine ataxia. And this is, it's a problem with balance. Tonight is insomnia and so forth. So there and there's no psychiatric condition that has not been found to be associated in the literature with gluten, Such sensitivity or associated in general things like anxiety, depression, psychosis, bipolar disease and so forth. So it's interesting to note that About 70% of Cilia patients, their main complaint is not gastrointestinal in nature, but neurological and psychiatric. Of course there are other manifestations like joint pain, skin issues and so forth. So let's think about why and I get this question all the time, all the time.

Why is gluten so bad? It's kind of hard to understand because we have been consuming week for thousands of years. So why is gluten so bad? So let's talk about that because that is so, so very relevant. Number one we have found in the literature that gluten has been found to be the one of the most inflammatory molecules. So glutinous is capable of producing inflammation not only in the gut, but every tissue in your body. Number two gluten has been found to break down the gut blood barrier, resulting in systemic inflammation. Now the gut brain barrier is designed to only allow welder digested particles of food to go into general circulation and prevent pathogens and other damaging molecules when this barrier is compromised, it opens the door to inflammation pathogens to attack your organs, your body. It opens the door to listen to this. It





opens the door to our immune mechanism. So this mechanism has a key role in our immune conditions. Not only celiac but things like Hashimoto's and lupus for example. Now the third thing why gluten is so bad once there's a breakdown in the gut blood barrier, the brain blood barrier breaks down as well as you know, the health of the brain will be compromised and that is a mechanism that results from a gut on fire. Or I'm sorry, a gut on fire is a brain on fire. Number four gluten sensitivity has been found to be a risk factor for opening the door to many food sensitivities. Now I know a lot of people who are sensitive to gluten don't take it very seriously, but they should because like I said, it opens the door to many other food sensitivities and before you know it you have more and more and then you cannot eat a lot of things.

**David Jockers, DNM, DC, MS**

But I don't know gluten, I don't know if you mentioned this, I didn't hear it, but gluten increases the amount of zonulin in which is a little protein that increases the permeability in the intestines, meaning that, you know the little, you know in our intestines it's one cell wall and these cells are held together by these tight junctions and the tight junctions are basically connective tissue that holds it together and we need that to be like pretty strong and steady, you know and and resilient in order to protect large undigested food particles and bacteria bacterial waste things like that from getting into the bloodstream. And so zonulin creates more permeability, meaning it weakens those tight junctions and allows for more bacteria and pathogens and potentially undigested proteins to get across into the blood into the bloodstream. And then our body says oh my gosh there's high bacterial loads or there's high amount of bacterial waste products like lip oh polysaccharides, we call that endotoxin and that drives up inflammation throughout the body. And so this is one of the mechanisms behind it is this increase in zonulin.

**Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Exactly so it can start with and then you know it goes on and on. And then lastly and there are many things that why gluten is so bad, but today I'm just talking about five that are pretty huge and the next one gluten is a factor in creating this bio sis that means that more bad bacteria populate the gut, producing an imbalance in our immune system and every system in our body depends on a healthy microbiome. Now there are a few of the mechanisms that make gluten, more problematic, more problematic food molecules. And this is shown by the statistics. So according to the literature, there are two major factors driving this. Number one wheat has been highly hybridized now starting in the sixties and the nineties. Plant breeders hybrid different wheat varieties in order to improve yield and disease resistance, making it harder to digest and making it more immune reactive. So and this is important to know because they're to know



because there is no GMO wheat in the market yet, or genetically modified organism also known as bio engineer. And that is important to know because now GMOs has relabeled or re marketed their products by calling the bio engineered. So if you hear the bioengineered food, that's really the new name for GMOs.

**David Jockers, DNM, DC, MS**

So weed isn't GMO but it's hybridized. It's kind of a natural way of crossing different plant genes and it's done in a way to create, you know, a type of bread that I guess, you know is tastier that most people find to be tastier easier to use than you know, bread that many of our ancestors were using, or wheat, I should say that our ancestors were using, right?

**Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

And you know what, we cannot outsmart our body. I'm sorry our body knows heck no, this is not normal, this is not the way nature intended it. So going back to GMOs and this is important to understand that distinction because GMOs products, what they do, they want to produce stronger crops, but say for example, take tomatoes, they may take tomatoes, they need to be able to to have tomatoes in the icy weather. So what they use, they use genes from salmon to modify weather resistance and tomatoes. So this across species and this has not been approved with wheat, which is a good thing. Now, the set second reason why gluten has become or weed has become so bad and this is super duper huge is a Glass of Faith. Now. Glass of Faith is the active ingredient in Roundup and it has been proposed as a major factor in the epidemic of celiac disease and gluten sensitivity. And it's why?

**David Jockers, DNM, DC, MS**

Well, I mean, I was just saying, yeah, I mean glyphosate, it's very hazardous to the gut lining, right? It's a really damaged gut microbiome and the gut lining. And so again, you know, this gut lining is only held in by one, it's only one cell wall. And we've got these tight junctions to hold it in place and we need to do everything we can to help create a very strong stress resilient gut lining. So we don't have pathogens getting into the bloodstream. So we don't have endotoxins. We don't have large undigested proteins. So these kinds of things make the gut lining weaker more permeable, right? Or damage the villi drive up inflammation in there is really, really problematic. And you know, it's going to increase our risk of developing autoimmune conditions, neurological conditions. You know, today we're talking about anxiety. So yeah, glyphosate is a huge factor here.



**Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Right and some people will wonder, well, why do we use classified with wheat? Well, it's widely used in wheat and crop and oat crops and many others and is used before harvesting and of many non organic crops. And the purpose is to reduce the amount of residue that needs to be cleaned up and get a head start to the next years of weeds. So according to a published paper in the journal of interdisciplinary toxicology, fish exposed to glyphosate developed digestive problems that are reminiscent of celiac disease. Now celiac disease is associated with an imbalance in gut bacteria that can be fully explained by the known effects of glyphosate and gut bacteria. That is so interesting. And then celiac disease characteristic impediment and detoxifying environmental toxins and deficiencies and vitamin D. Iron. try to fan and many other nutrients poor bile production and so forth. Magic glass of faith effects and depletion of these nutrients and amino assets. Now furthermore celiac disease patients have an increased risk of lymphoma and fertility miscarriages, birth defects can also be explained by glass of fate. In other words, glyphosate toxicity matches the select disease impairment.

**David Jockers, DNM, DC, MS**

Now likes to say it is kind of amplifying the effects of what's happening there with gluten.

**Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Actually the way the research is presenting it is more the reason like glyphosate is in the wheat in the in the actual molecule and and it becomes toxic but if we didn't have that, we probably wouldn't be experiencing this. So it's not so much amplifying it but producing that fact.

**David Jockers, DNM, DC, MS**

So what you're saying is if somebody were to get organic without glyphosate, it may have better a better experience with it and it wouldn't be as inflammatory, wouldn't increase adrenaline. Is that what you're saying that?

**Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Yes, but then in addition to that, you have to have we have what we call new wheat. So even if you have, because our wheat in America is so hybridized and is polluted with slice of fate, even if you get non organic wheat, you may still have the the effects of the new,,

**David Jockers, DNM, DC, MS**

Yeah, you mean getting organic, getting organic wheat because it's hybridized, you're saying it's changed the glia don't strange or the gluten that's in there, which can increase the inflammation,



whereas we look at something like in corn wheat, which basically is a type of wheat that was used back in biblical days. So thousands of years ago that wasn't hybridized and the molecules of proteins in there had a different structure that was, that's a lot more tolerable. And you can still get in corn wheat and if you get organic kind corn wheat, you're saying somebody should have a much better response with that.

**Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Correct. We also have to remember that for some people that are genetically vulnerable to be sensitive to wheat, even if they have ancient wheat and that is organic, they will still have an immune response, so that is important to understand. So but for those that don't have an immune response to gluten and they say they would go to Europe where they don't have argued, they still have ancient weed and glide sulfate is outlaw. Many of people report that being gluten sensitive in America when they go to Europe, they don't have those reactions.

**David Jockers, DNM, DC, MS**

Yeah, I've heard a lot of people say that as well.

**Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Yeah, so just to say, so if you have celiac or you have a genetic predisposition, you will, it will affect you still. So I wouldn't recommend that. So in conclusion there's a definite link between gluten and anxiety having to do with the gut brain access. And there are many reasons why weed is a factor and anxiety, it is a very inflammatory food molecule enhance having the potential of inflammation, ng the brain breaking the gut blood barrier and the brain blood barrier and it has the potential a cousin and increasing food sensitivities and that is so sad. So it has been found to be a key factor and out of immune mechanisms. And Goddess bios is having an impact on brain function and mental health. So there are two major reasons why wheat and gluten are so inflammatory molecule hybridization of wheat and the use of glass of fate on wheat crops.

**David Jockers, DNM, DC, MS**

Yeah, what should somebody do here? So obviously going gluten free is one thing, but there's a lot of gluten free things that are in the grocery store that you know, I wouldn't exactly say are healthy right there using a lot of gluten free alternatives that may have less of an inflammatory effect, but a lot of them are really highly processed, hyper palatable types of things. And so you know, so when you're looking at it, just because something says gluten free doesn't mean it's healthy, really want to look for real whole foods, right?



**Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Absolutely. And and I like to touch on that because there's been studies that show that when people go gluten free, you know, their influence inflammatory markers go up and it's just what you said that people say, oh it's gluten free so it's healthy so I can have two muffins instead of not having any muffins or half one and a muffin is a muffin, is, sugar, is refined flour and then when they're gluten free there's more additives to it and flavorings to make it more palatable. So it's very dangerous for us to assume that something that is gluten free is healthy for you.

**David Jockers, DNM, DC, MS**

And a lot of times they're using corn, which you know, technically is, is gluten free. However oftentimes it's not organic, it's highly sprayed with glyphosate, like we were talking about.

**Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Exactly, exactly. And sadly enough, a lot of people that are sensitive to gluten are also sensitive to corn and so forth, but going back to what do we do, So if you're suffering from anxiety or mood disorder, what you need to do and what I recommend that you go gluten free diet for at least three weeks and I suggest that you be squeaky clean. I mean absolutely squeaky clean and get educated before you go on to that diet because like you, we mentioned, many people just jump right into, you know, gluten free items that are not healthy at all. So, the reason why we want to do an elimination diet is to bring that inflammation down. And a lot of people have, they are able to notice a difference. Now. Their anxiety may are not resolved with only three weeks, but they, most people do feel a difference in their entire system. You know, people start feeling like they're less aqui they feel their headaches are gone.

They're digest symptoms are gone. So what I suggest is that when you want to do that, you sit down and make a list of all the symptoms that you have and don't think anything, oh, there are only think of digestive symptoms. No, no, no, go at any symptoms that you have and maybe insomnia and maybe restless legs, anything you can and that you can think of that you're suffering and then go into this elimination diet. And when you do elimination diet too, choose foods that are naturally gluten free. Okay, so that would be so important and let me reiterate about the importance of being gluten free. This is not gonna be like a diet, like normal weight loss diet where you have a cheat day, so I'm just gonna cheat today or this meal because then you're going to produce that inflammation, that immune reaction, you've got to be gluten free. And how I'd like to illustrate the import being gluten free. And what it is 100% gluten free is like saying I'm going gluten free is like saying I am pregnant. Okay, so what does that mean you





either pregnant or you're not pregnant? You cannot say I'm almost pregnant today, I'm pregnant, but tomorrow I'm not, no, no, no, no, you're either pregnant or not pregnant. That is how serious you have to be 100% gluten free. Now it is particularly troublesome to go gluten free when you go dining out because you get exposed to other foods, cross contamination and so forth, and for those occasions and I recommend that you go with a special enzyme formula that will help you digest the gluten if you happen to be cross contaminated and you and it's also a good idea, it's also a good idea.

**David Jockers, DNM, DC, MS**

You know, if you are very gluten sensitive, maybe you've been diagnosed with celiac, you know, you've got significant symptoms, you have a very low threshold because there's some people that, like, for example, I'm gluten free, but if I have gluten, it's like, I don't really notice any symptoms, but I go gluten free in general because I want to keep inflammation under control of my body. But if I were to steer off, you know, one or two times I have a certain threshold, you know, that I'm able to handle. Although, you know, for the most part I stay gluten free. Whereas others, their threshold for what they can consume is very low and drives up inflammation, particularly genetically if they have a genetic susceptibility, to it and they've tested have, you know, antibodies associated with certain components of it. So for those individuals, I think it's a really good idea to actually tell the waiter to that they have a severe gluten reaction in today's day and age. Restaurants are, you know, they don't want, they don't want an ambulance coming to the door. Right? So if you say words like that, like, hey, I have a severe gluten allergy um, and so I just really want to make sure that I'm able to enjoy my meal here and we don't have to call the ambulance. They will do whatever they have to do to figure out, you know, how to get you a really gluten free meal.

**Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Exactly, Exactly. And another possible next step is to do some testing to find out if you're gluten sensitive or have celiac disease or have a celiac genetics and that is important because for some people that have celiac genetics, but they yet have not developed celiac, this is so wonderful. So, yeah. Right. And, and there's yeah, exactly. And so what I have found that with working with clients that labs, having that lab done gives them an incentive and it's more powerful for them to go would free and stay gluten free.

**David Jockers, DNM, DC, MS**



Yeah. When you know, when you know that exactly, when you know that you've got the genes associated with it or perhaps you've done like antibody testing or something along those lines then definitely gives you more, you know, just verifiable data that make you more convicted.

**Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Exactly. Exactly. And the lab test that I recommend is the complete gluten sensitivity panel and this panel test several week fractions or peptides of gluten as opposed to the only one that most office this test, which is Alpha Gladden. And this is mainstream testing. And when you order, when you only have that particular test, just one alpha glide. Didn't you miss a lot of people a lot.

**David Jockers, DNM, DC, MS**

Even even gladden, you've got like beta gamma gardens, right? That you may be having a response to. There's trans glutamate enzymes in in wheat gluten that you may be reacting to. There's like a whole bunch of different compounds in there. So you're only getting, you know, a percentage of people if you're only testing the alpha didn't.

**Ivonne Boujaoude, ND, MS, MA, CFMP, CFSP, CGP**

Exactly. So if you learn that you need to avoid gluten via elimination diet or testing elimination of gluten is permanent. It is not going to be for a period of time until your gut heals is going to be permanent. And this is important to know because it will prevent that inflammation to be ongoing and it's very, very important and I find people this knowledge gives them, it makes them very upset and you know and rightly so and it has, you know, we're so tied to our food is so tied to our emotions, right? So it's very but what I like to help people think is that you can see this as a half full or half empty glass of water. So I choose and I invite everybody to choose to see it as a half full glass because how many conditions do you know that if you eliminate one food from your diet is going to bring your condition into possible remission or is it going to prevent you to get more conditions or that? So just by doing that one thing is going to improve your quality of life that for me that is not a glass half food that is more like my glasses overflowing. I mean that is so exciting that I can do one thing to improve my health.

So much. So take heart eliminating gluten may be hard and is very challenging. But being sick and anxious really is worse. And eliminating gluten from your diet may help you improve your overall health and prevent other conditions? Because when you look at the literature, practically any conditions, you can find an association with gluten like diabetes, cancer, Parkinson's disease etcetera. So in closing, I like to mention that I created a questionnaire to help people determine if they have a risk for celiac disease or gluten sensor activity. And it is by no means diagnostic, but it will help an individual determine if it would be a good idea to do an elimination trial or getting



testing done. And if you're interested, you can email me at [drivonne@drjockers.com](mailto:drivonne@drjockers.com). That's my email and you can request that questionnaire.

**David Jockers, DNM, DC, MS**

Yeah, that's great. And that's super helpful for people to know. So, you know, basically what you're saying is that going gluten free here could be one of the easiest steps, even though, you know, it seems like, hey, that's a lot of foods, there's so many other foods that you could be consuming and enjoying and it really beats a lifetime of sickness suffering developing, you know, multiple different chronic health conditions and you know, depending on medications for the rest of your life and medical treatments and there are so many people out there that are doing that. And if they just remove gluten that would go a long way and actually improving their health. And so really great information you guys can email Dr. Ivonne at again, D R I V O N N E. So [drivonne@drjockers.com](mailto:drivonne@drjockers.com) to get that great questionnaire and that will help you understand if potentially gluten is an issue in what you're dealing with. So definitely, definitely do that. Thank you again for your time. Dr. Ivonne, that is a wonderful presentation. And guys, we will see you all in a future presentation. Be blessed everybody.