Introduction to Gluten and Brain Health

Welcome to the reverse brain disorders Summit. I'm your host, Doctor David Jacobs, and today I'm interviewing Doctor Peter Osborne. And we're talking all about how gluten can destroy your brain and your nervous system.

We're going to go into detail on a leaky brain and the gut brain connection. How gluten drives up inflammation in the body. And Doctor Osborn is really an expert when it comes to understanding, gluten sensitivity.

And he is the clinical director of Origins Health Care in Sugarland, Texas. He's often referred to as the gluten free warrior, and he's one of the most sought after functional medicine doctors in the country.

His practice is centered on helping those with painful, chronic, degenerative, and autoimmune diseases, with a primary focus on gluten sensitivity and food allergies.

He's a founder of Gluten Free Society and the author of the Gluten Free Health Solution and Gluten Allergy, which is a series of digital videos and e-books designed to help educate the world about gluten sensitivity.

And he has the bestselling book No Grain, No Pain was a fantastic book for those. You guys are interested, so you're going to learn more about the science of what's happening when we actually consume gluten, what percentage of the population?

It actually has a true gluten sensitivity and needs to avoid it. Why do some individuals struggle when they eat wheat and gluten containing foods? Here in the United States?

But when they go to Europe, they seem to do great eating breads and eating different gluten containing foods over in Europe. So he's going to go through all of that.

And also we're going to talk a lot about the nutrient deficiencies are commonly associated with, with a gluten sensitivity and key nutrients and support strategies to help heal the gut and, help heal the body.

So you guys are in for a treat here. So let's go into the show with Doctor Osborn. Always great to have this conversation with you. I know you're an expert when it comes to gluten.

When it comes to gut health, brain health, and the effect that food sensitivities can have on our overall health. And so, you know, let's start the conversation by talking about the gut brain connection and how what's happening in our gut actually impacts our brain.

Yeah. I think it's such an amazing field of research in the last, really, the last 20 years, I mean, they've been a number of text number of of research studies done on diet.

Right? Just generally how diet affects the microbiome and how the microbiome regulates the production of neurochemicals like serotonin and dopamine. And that in turn affects how we think.

And you know, how we feel rewarded for our behaviors or how we feel depressed or how we might feel anxiety. And so, there's no shortage of research now connecting the microbiome and the food right to our thoughts.

Gut-Brain Connection and Leaky Brain

And I think many, many now in the field of psychiatry and neurobiology are turning to the microbiome to, to say depression is actually a form of intestinal leakage, right?

Or of intestinal inflammation called neural inflammation that starts in the gut. And I think that's where really in my wheelhouse, that's where gluten really shines and comes in, because we know there's so many different ways that that gluten can impact the GI tract.

But even not just gluten and also grain as a whole, right? For other reasons. Yeah, absolutely. And so, you know, there's a term called the leaky brain.

I know that, you know, I've talked about it in a lot of my discussions. And so leaky brain, you know, a lot of people have heard of leaky gut, right. That term came out, I don't know, eight, ten years ago and became very popular in a functional medicine, natural health world.

Leaky brain is kind of a new term that we're starting to understand. And maybe, you know, it's a it's a strong indicator, the strong link between issues going on with leaky brain and mood disorders, increased neurological inflammation and neurodegeneration.

So can you elaborate on that some more? Yeah. So if we if we use gluten kind of as an example, one of the things that we know gluten can do just just in people with gluten issues is it causes a disruption of the barrier of the cells in the GI tract, right.

Leaky gut. And, so think of it as microscopic pinholes that are being punched in the tube of the gut lining. And with that happen, what happens next is that allows for poop to leak into the bloodstream.

But even more, it allows there certain bacteria that live in our gut. And when our gut is sealed, not a big deal. These bacteria will produce byproducts.

One of the byproducts that's been discovered is called lipopolysaccharide, or LPs. And what happens with leaky gut is this product can basically leak into the bloodstream, and it can affect the blood brain barrier.

It can actually disrupt the blood brain barrier, opening up, opening up that barrier as well, allowing for things that shouldn't be allowed into the brain.

Right. And this is where some of that neurological inflammation can come in. So if you back it up again, leaky gut allows for the progression of chemicals to leach across the gut barrier that can then in turn affect the GI tract.

And then even beyond that, if we if going again deeper into gluten, the malnutrition that's caused by gluten for so many, you know, the B vitamin deficiency, the mineral deficiencies, you know, can disrupt the, the the body's ability to repair.

Right. So if we're talking about a, you know, the blood brain barrier is a is a tissue, right. It's it's epithelial tissue that has a tight seal. And in order for that seal to be formed you need B vitamins.

You need nutrients. And so with that malnutrition comes an inability to repair that barrier. And with that gluten damage comes the ability for that barrier to be broken down.

So when you're breaking it down, but then you're malnourished to the level that you can't rebuild it, then it becomes progressively chronic, and it allows for inflammation to really set into the brain over longer periods of time.

And so again, beyond depression, beyond anxiety, what are we seeing? We're seeing cognitive decline right of you, if you will, dementia. And you know, a lot of people think of Alzheimer's and it's a disease in the elderly.

But we're seeing that much earlier. And I know you've probably seen that in clinical practice where people come in and it's not like they're forgetting their spouses name, but, they don't have the ability to walk into their kitchen and remember why they walked in there.

Right. And it's like, why did I come in here again? Or they go to their bed, or why am I in here again? And that's

kind of the early onset of that, that brain fog, early onset before it becomes full blown dementia, it becomes I can't remember what I was supposed to be doing here in this place.

Right. And so I just kind of slowly progresses over a period of time the longer it's allowed to perpetuate. Yeah, it's really big issue cognitive decline, Alzheimer's, neurodegenerative conditions in general, a huge issue really growing.

And you know, the what's happening, the health of the gut is playing a significant role with that. Now let's go back to gluten. What is it about gluten.

Because you know, there's I know there's like alpha gliadin, which is a, you know, a protein component of gluten. What is it about gluten that is contributing?

How Gluten Triggers Leaky Gut and Inflammation

You know, that's basically causing the leaky gut? I know that gluten, for example, stimulates xenial in its proteins. Vanillin release. Can you go into some of those kind of more of the, the mechanisms behind how this is causing leaky gut and leaky brain?

Yeah. So for people with it's important to know that for people with gluten sensitivity. So I want to be clear there, because some people would argue that gluten is bad for everyone.

I don't know that we know that. I don't know that we have enough research to that. And I mean I'm the biggest advocate of a gluten free diet probably in the world, but at the same time I think it's important to delineate, you know, for somebody who has gluten sensitivity.

And the way I define that is genetically, if they have the genes, the positive ID genes that predispose them to react to gluten from an immunological perspective.

And now we're in trouble because what happens is gluten. Is a protein. And really it's not. We use the term gluten as a singular term, but really it's a plural term.

We should say gluten, because there's, as you mentioned a minute ago, alpha gliadin, which is a type of gluten found in wheat. And then there's like seagull and found in rye and horti and found in barley, and Zayne found in corn and or is it and found in rice.

There's lots of different forms of gluten. I think. It was 2010. It was a group of researchers from Australia discovered it was like 400 new forms of gluten, 40 of them were more toxic than the gliadin found in wheat.

And, and so we have to look at gluten as, as a whole. And that's why I say grain free as opposed as when I wrote my book, No Grain, No pain. I didn't write no gluten, no pain, because the connotation that gluten is only found in wheat, barley and rice incorrect.

But it is an FDA approved definition. And globally, it's the accepted kind of definition for celiac disease. But again, we want to look at the family of gluten proteins.

If you have the genetics for that reaction. What that means is when you subject your body to gluten of any kind or any form, your body is more going to perceive that gluten as an enemy the same way it would perceive a virus or a bacteria that doesn't belong as a potential threat, and it's going to create an immunological or an immune response against that gluten to try to neutralize it.

And so there are many different types of immune response, is one of them. It has to do with the interaction with something called, trans glutamic acid, which is an enzyme secreted in the small intestine.

And so what happens is we get an autoimmune response against that. And then that can create damage to the

lining and villus atrophy, which leads to leaky gut.

There's also the connection that Fasano discovered, as you mentioned, where Zainudin played a role, the disruption, of the of the gut barrier as a result of Zeno and production and other bacteria can do that, too.

Gluten is not the only thing. It's not the exclusive in causing leaky gut, but it is one of the most well researched foods or food proteins that we know can do it.

So there's there's the the autoimmune damage to the intestinal lining, which is actually celiac disease. Then there's the upregulation of Xining Lin. And then there's the immunological response that can lead to antibodies of other varieties that can also damage the gut.

But also then there's an immune response that can lead to the production of chemicals called cytokines and interferons that can also damage the gut. And then there's now new research coming out showing that it can interact with a special receptor in the gut called an called the toll like receptor or a TLR, and that it induces inflammation through toll like receptors.

And so there's all these different mechanisms and pathways. And that's the problem, doc, is that you get people go to their GI doctors and they get a celiac test.

Right? Which is really even the celiac testing is not specific, because basically what they're doing is a biopsy of the small intestine. And in a, you know, the small intestine is the surface of a of a tennis court, right?

The surface area. So it's it's like taking little microscopic fragments of a tennis court and saying, this is the whole tennis court. You know, obviously you could have damage on one side of the court, not damage on the other.

And it's the same with your intestines. So biopsies can give you a false negative. As far as a diagnosis is. But then you also have the blood tests that measure antibodies, one of the antibodies being for only for gliadin.

Well, gluten is one type of gluten found in wheat. But then you have antibodies like like trans glutamate. And it's been widely shown that many people with gluten sensitivity do not produce trans glutamic antibodies.

And so if you're getting those types of tests done and then your doctor says, oh, eat gluten all you want, you don't have celiac disease, it can be a very misleading thing.

And that's again, going back to genetic testing. If you have the genetic markers, that gives you the predisposition to react to those proteins in a negative way.

And that's where it's a preventative issue, because gluten sensitivity is not a disease. It's just in my opinion, it's a state of genetics. You either have the genes or you don't.

And if you have them and you eat gluten, then your body will view it as an enemy and it will attack or try to neutralize it. And if you don't have them, not so much.

Now, there are other aspects of grain beyond gluten that can cause immune responses. And that's different, right? So that's where some people, some people, for example, when they buy bread and they react to it and then they go over to Europe and they say, hey, I didn't feel as bad when I went to Europe.

Well, glyphosate say, which is this, chemical, you know, pesticide sprayed, double sprayed on most grains today. There's also atrazine, which is another, chemical.

And then there's there are also other components to grain, like their their families have proteins and grains called amylase, trypsin inhibitors and Serbians, which can cause immune responses that have nothing to do with gluten.

There's the fact that grains are a highly mold contaminated food and can contain mycotoxins, which can make

people sick. So there are other aspects to grain that damage the the gut lining and can cause leaky gut.

Gluten is just probably the most famous. Yeah, yeah, it's a really good rundown. So in summary there, celiac disease is really a late stage disease, not an early stage diagnosis.

You're catching something way after many years after. It's it's developed in the body in a traditional, medical testing when it comes to celiac and when it comes to, you know, gluten sensitivity in general is very limited because they're only looking at a certain farm, a certain group of, of antibodies for a certain group of proteins, but not getting the whole wide spectrum of gluten sensitivity.

And really, to go upstream, we want to look at the genes, HLA, dk genes, which tell you if you have that predisposition or not. And, you know, you also talked about obviously certain enzymes like trans contaminates as well.

You know, that can really factor in there.

Gluten Sensitivity, Testing, and Grain Reactions

And then that was going to be one of my questions was a lot of people will say, yeah, I can't eat wheat in America, but I go to Italy and I'm able to consume bread and I feel great.

And that that could be a number of different factors, could be what's being sprayed on the wheat, could be, you know, the quality. Perhaps there's more mold and mycotoxins on the wheat that you're eating here compared to there.

So there's a number of other factors, but it's not not necessarily the gluten component. Is that correct? That's correct. Yeah. So there's that's why I always want to say differential gate whether or not you are gluten sensitive.

Because if you truly are gluten sensitive don't go eat the grain in Europe. Yeah. Because the other thing we know about about gluten sensitivity is there's a fourfold increase in risk of death if you don't change your diet and you don't want to, you know, you don't want to give yourself the false impression that you can just go over there and gorge out on, on pasta and bread.

Yeah, that's really good. And I mean, people definitely need to tune in to know that and understand that's a very, very serious issue. And so, you know, when we're looking at, gluten sensitivity, what percentage?

I know you do a lot of this genetic testing. What percentage of the population has gluten sensitivity genes. And I know, you know, when you're testing you're looking at a certain a certain population group that's coming in that has autoimmune conditions, has chronic health issues.

So I'm sure the percentage is higher there. What would you say it is as a whole. And then what would you say it is for people that are dealing with chronic health conditions?

My experience with chronic health conditions, it's in the order of magnitude of 99% at least. That's just based on my own personal clinical. As far as globally, I think I think there are several researchers that have published on this topic.

But if we're looking at what is the suspicion of gluten sensitivity, you know, on the scale of magnitude of everyone, right? So like some researchers say, it's only celiac disease.

Therefore it's only like that 1%, which I don't agree with. And then but but there were some major, papers published in the World Journal of Gastroenterology that closer estimated about 7%.

They believe that about 7% of the global population has a gluten sensitivity issue. And then there are doctors like myself who do a lot of this testing.

And we have different ideologies about about quantitatively, how many people actually have this issue. I personally believe it's closer to between 30 and 40%.

A few others do as well. So, I without actually testing everyone in the world, I don't think we have an exact number that we can give, but I mean, if we're just going conservative estimation 7%, that means if you're in a room and there's six people around you, one of you are gluten sensitive.

And, and that's a that's a rather large number compared to how many people are actually trying to follow the diet. Yeah. I mean, without a doubt that it's a large percentage of people.

And so when we're looking at some of the main symptoms, you know, a lot of people think it's mainly digest of issues because of course they've heard about celiac disease.

But there's this, you know, growing about body of research looking at this condition non celiac gluten sensitivity. What are some of the hallmarks of that.

Symptomatically it's very esoteric. And it's it's very subtle until it's not. So like as an example many people will struggle with chronic inflammation.

And I see a lot of people with joint pain that just won't go away. It was joint pain that was caused by a non traumatic issue. So it's not like they injured their joint.

It's not like they strained or sprained something or you know we're lifting weights and you know and had an issue. It was just hey my my joints hurt all the time and I don't know why.

Or my muscles are constantly sore and tight and I don't know why. So joint pain, muscle pain is a very common hallmark for many, which is that, you know, again, why I wrote No Grain, No Pain was to bring more awareness to that.

But then there are also hormonal problems that we see a lot with females. So, disruption and cycle heavy PMS symptoms, especially in the area of anxiety and depression around the cycle.

We also see a lot of neurological problems associated with gluten. So neuropathies, that's numbness and tingling in the hands and or feet. But also I would call neurological, neuropathy of the brain being brain fog.

Right. Which is lack of focus, lack of concentration, inability to remember things clearly. Word recall problems are very early onset symptoms. We see a lot of skin manifestation.

Eczema can be a manifestation of gluten sensitivity for many. So if you've got unexplained or eczema diagnosed for unknown reasons or purposes, and you're just rubbing the steroid cream on your body to try to keep it at bay, you want to look at gluten as a potential trigger.

There are other autoimmune skin conditions. One, there's directly linked to celiac disease. It's called dermatitis or a form is that's less common, but it looks like almost like chickenpox.

It's like little blisters that raise on the skin. And then there's also a psoriasis in LIGO that have been linked to gluten sensitivity. Another really big one that people aren't aware of is Hashimoto's.

Hashimoto's is is is there number of research studies now that link or that, that show that people that go gluten free, their antibody levels completely plummet and drop and go away.

So if you've been diagnosed with Hashimoto's based on, you know, thyroid peroxidase or any thyroid globulin antibody levels being elevated, you should ask your doctor to measure you for a gluten sensitivity or do a try gluten free diet and see if your thyroid numbers don't dramatically improve, because that's a very, very big one where where people just don't realize they're connected, right?

They got the hypothyroid diagnosis and they have no idea that there's an association with diet and hypothyroid because most endocrinologists, as you know, don't train in nutrition and have no idea that there's a correlation.

So they just tell their patients that it's not important. Just stay on the centroid for the rest of your life type deal. But those are some of the really common ones.

Yeah. And that's critical. And we look at thyroid hormone that's so important for brain function really helps turn on the mitochondria within the brain.

So brain symptoms are oftentimes a sign that there's issues going on with lower levels of thyroid hormone production. And most typically because of antibody damage to the thyroid tissue.

And so we look at gluten when it when it's affecting and it causing neurological symptoms. Is that mostly because it's just driving up inflammation in the body.

Or is it actually impacting like is it a actually a nerve toxin. Both. Gluten is a nerve toxin. And there are a number of studies and I've seen this clinically where people are making antibodies against their own neurological tissue.

And those are measurable. Those are things that you can actually measure. So that's one aspect is that it drives the autoimmune process against the the nerves against the brain.

And the other is generalized inflammation. Of course, if you're if you're eating, a food that causes or drives off inflammation, one of the primary hormones that your body will make in response to chronic inflammation is cortisol, which elevates blood sugar and causes glycation.

Symptoms and Autoimmune Conditions Linked to Gluten

And now you end up with, you know, they call Alzheimer type three diabetes now, right? So you've got excessive blood sugar being dumped, even if the diet is not high carbohydrate.

And that's as a result of that excessive, you know, release of cortisol. So in a lot of doctors will treat it with more cortisol. So when they give a corticosteroid now blood sugars going up even higher, blood pressure is going up higher.

And of course that increases the risk for neurological conditions, as dementia but also stroke. And then there's, you know, there's other evidence showing that that just not necessarily looking at antibodies per se, but just looking at neurological conditions and gluten free diet.

So one of them being seizure disorder and epileptic, you know, epileptics, there's a lot of research showing that gluten free diet actually improve, reduce seizure, in patients that have been diagnosed with epilepsy.

There's a lot of research on keto, which Akito is a gluten free diet. Right. So you're, you know, you're going basically you're going gluten free, but you're also going low carb simultaneously.

And that that has a major impact on neurological healing and that can affect epileptic seizure disorder. Then you also have anxiety and depression. There are a number of studies showing that when people go gluten free, a lot of times their anxiety diminishes or their depression goes away.

And I think that, you know, some studies show there's an antibody connection where there's not immune process to that. And other studies just simply recognize it through inflammatory markers like CRP elevations and gluten free diet.

So I think I think it's probably a little bit of all of the above. In my experience, it is. And that's why I try to be as thorough and measure as much of this as I can, so that I can be as objective about understanding why something is happening to a person, as opposed to not.

Yeah, for sure. And you also talked about how gluten sensitivity can cause neuro, can cause nutrient deficiencies. You mentioned B vitamins earlier. What are some of the other major nutrient deficiencies that are associated with gluten sensitivity?

You know, the top five that I have seen over the years, number one is iron. So iron deficiency, you know, leads to oxygen deprivation to the brain, and it can cause clouded thinking and, anxiety and trouble sleeping.

So iron number one. Number two is vitamin B12. Number three is zinc, number four is vitamin D, and number five is omega three. Specifically EPA. I see a lot more EPA deficiency from the omega three family than any other type.

And again, EPA regulates inflammation. Vitamin B12 regulates myelin production around nerve. So you can get neuropathy anxiety, depression with that iron deficiency can cause very similar symptoms to iron deficiency.

And then you have vitamin D deficiency. And vitamin D is one of the major immuno regulators of the body. So a lot of times people with vitamin D deficiency have predispositions toward developing autoimmune disease against all of their tissues, not just any one in particular.

And then with omega three, again, the omega three regulation just purely regulating inflammation and quantitatively how much inflammation occurs as a course of daily action because we all make inflammation to regulate, you know, maintenance and repair of cells.

It's when that inflammation is it's higher than our ability to heal or repair it where we go into a repair deficit. So those are five key nutrients that I see on a very regular basis in people with gluten sensitivity.

Yeah. And that's interesting. Vitamin D deficiency. Now obviously a good percentage of our population is vitamin D deficient. And we get it naturally from the sun.

You know we can obviously get it get a little bit from from our nutrition from egg yolks, from organ meats, things like that. But very, very small amounts.

Mostly we're getting it from the sun. So are you saying that was it the vitamin D deficiency that perhaps, increased, maybe the inflammatory reaction somebody with gluten sensitivity had or was it that some that the individual that had gluten sensitivity has the the genetic markers and then also is consuming gluten, increasing inflammation.

Their body, they're not able to absorb the same level of vitamin D that they would if they were on a healthier diet, a more genetically congruent diet.

And they were exposed to the same amount of sun. Yeah. So, I mean, vitamin D is a fat soluble vitamin, right? And one of the hallmarks of celiac disease is fat malabsorption.

We look at a number of different fat malabsorption markers in the stool to identify whether or not that's actually happening. And so vitamin D being a fat can be affected in that way.

It's also important to know that many people with gluten have, liver gallbladder issues. And so what happens if they've had their gallbladder removed.

It's also going to affect their fat absorption of vitamin D from the diet. So they may have be affected in that way. But the other reason I speculate that vitamin D deficiency is so great, in these patients is mainly because they're inflamed, they're eating food that is inflaming them.

And so they're using more vitamin D, in an effort to put the fire out in an effort to regulate the immune reaction. And so they're it's not even necessarily that they may not be getting enough.

It's just that their demand for it goes up to try to put out the fire. Yeah, that makes sense. Another nutrient that I commonly see deficient is magnesium as well.

Are you seeing that associated with gluten sensitivity? I do it's it's a very common one as well. It's just those were my what were my top five ones we see more of than anything else.

Yeah. Yeah. Magnesium deficiency plays a critical role when it comes to brain health, neurological function. You know, so there's a lot of issues with that as well.

Yeah. No doubt. I mean, I see the gambit. I mean, when we do our tests for for nutrition, I mean, we're usually testing all 40 essential nutrients in everyone who walks through the door.

And so, it it widely varies. Right. That's one thing I've learned is that you could you could guess that saying everybody needs x, y or z. And, and even if they were the most common, you could be wrong a lot of the time because it varies so widely.

And I think that just basis basically it boils down to biochemical individuality. You know what, what one person may suffer with as a deficiency, may not be the same as somebody else.

And for a very various number of reasons. Yeah. For sure. Now, when it comes to, healing, naturally healing, the body, when it comes to neurological condition, somebody has gluten sensitivity.

Is it enough to just go on a gluten free diet sometimes? Yeah. I mean, I've had people write in to me, hey, I read your book and it changed my life. My neuropathy went away. I had it for 20 years.

I get letters like that on a regular basis. So whether or not they were supplementing don't know. They weren't forthright with all of the things they were doing.

But people reach out to me all the time just just saying how much diet changed, improved or impacted it. I know I've seen it both ways, and I've also seen cases where we had people with severe neuropathy that changed your diet.

It didn't go away. And it was because they had developed such a severity of nutritional deficit that we really had to to supplement through that to get them over the hump.

And in some cases, because the damage to the GI tract was so extensive, we had to supplement them with much higher doses to create passive diffusion, absorption through the GI tract, so that they were capable of getting the nutrition that they needed in order for them to just heal from the from the previous years of gluten induced damage.

Nutrient Deficiencies Caused by Gluten Sensitivity

Yeah, that makes sense. And I know in your book, no, no grain, no pain, you put people on a grain free diet. And so a lot of people will go on a gluten free diet, and they'll look for foods that are labeled as gluten free.

But a lot of those foods obviously have corn. They have different grains, rice or maida. Rice is a very common what's considered a gluten free alternative.

So that's a, you know, that's we're finding that in a lot of the foods. And then also, you had mentioned how a keto diet can be really helpful. Naturally, keto genic diet, originally how it was taught was gluten free.

But now a lot of food manufacturers are actually making keto approved foods, and they're using wheat gluten as one of their top ingredients. So you really do have to be careful. You can't just look at a label.

It says, as says, gluten free. Yeah, I know, unfortunately, anytime a diet reaches mass popularity, the food manufacturers get Ahold of it, warp it, manipulate it, and create garbage for the rest of the world.

Unfortunately, a lot of those people who aren't aware continue to struggle. They think they've gone on a healthy diet that should have resolved a lot of their issues, and they're still struggling.

I see that a lot in people that come to me who find keto, and they're buying a lot of the keto product as opposed to just eating real foods, right, and going in that direction.

Yeah, for sure. And in your book, no grain, no pain, you have actual meal plans, right? So you set up meal plans, you know, that really help people and guide people through this grain free diet.

What are some of the big challenges that people have when they first start coming off of grains? Like, as far as, you know, just kind of changing out what they're normally eating and what what kind of good replacements can they make?

I think the biggest challenge is analysis paralysis. They just don't know what to eat. So they need a reference or resource to kind of give them recipes and ideas.

And the other challenge to that is that they don't cook their own meals like they eat out a lot. So it's like, okay, you got to worry about cross-contamination.

You got to worry about hidden gluten because those can be dealbreakers for a person's recovery. So I think it's the analysis paralysis of I can't eat out.

I've got to focus on what I can make. So what can I make right. And so it's a learning curve of recipes. One of the things that we do at Gluten Free Society is that I have a I have a chef that works for us, and he's making new recipes all the time, and we just put him up at gluten free site.

It's free, gluten free recipes. You just click on that tab and you can pull up hundreds of food ideas and recipe ideas to help you, to help you navigate through through that aspect of it.

I'd say the other biggest challenge psychologically is dealing with family and friends who don't understand that a little bit is not okay, right? 20 parts per million of gluten that's a bread crumb can cause inflammation for 2 to 3 months.

And so if you're trying to recover from a chronic autoimmune disease, and every weekend you get a gluten bomb on your cheat day, you're not going to make it very far.

The diet is not going to really reap a lot, as much benefit for you as you would have hoped. So you've got to really be clear around family and friends that you know, you've got to stick to the diet and you need their support.

Otherwise it becomes a constant battle against the very people who love you, who just want you to have one little bite or try, you know, especially around the holiday season, you know, just try one little cookie.

It won't hurt you, you know? Yeah. Yeah, absolutely. And that's amazing, that one little breadcrumb for certain individuals that are very gluten sensitive can cause a cascade of inflammation and damage in the system for up to 2 to 3 months.

Yeah, I believe yeah. I mean the half life of a gluten antibody is, is like, well ranges from 30 to 60 days. That means what that means is when you eat gluten, you make antibody against it.

And that antibody creates a complex that damages your tissue. That's part of what causes the inflammation. And that antibodies half life, meaning it takes half life is the, the half the time that it is required for your body to break it down.

Right. So the half life of a gluten antibody is 30 to 60 days. So if you're lucky, at 30 days, you've gotten rid of half of that level of antibody damaging antibody.

If you're not lucky, it took you maybe closer to 60 days, right. And then and then that's just half of it. You've still got the other half still in you that you have to still metabolize out.

And that's that's why it's so important to know that because of fire, which is what inflammation is. It's a chronic fire, just like a campfire. It's very hard to start one.

Healing Strategies, Diet, and Supplements

But it's very easy to keep it burning. What do you do for a campfire? You just have to throw a little fuel on it periodically, and it will keep burning.

And that's what people do, is they think that that Sunday meal or that little cheat here or there is they'll be okay with it. And they they will be better avoiding gluten most of the time.

Don't get me wrong. Like, you know, 95% less gluten is better than, than nothing. But if you're really trying to overcome autoimmunity, remember that that process takes about 18 months.

And if you keep agitating your immune system once a week, it's it's going to take you closer a lot longer if you ever even do overcome it. My experience, 18 months is the quick side of of a recovery.

Three years is the noncompliant side of recovery. Yeah. Now what are some tips for people that are eating out? Maybe they're traveling things like that. What are some tips?

What can they look for when it comes to restaurants? What should they say to their, their waiter, their server when, when they're ordering their meal?

I think keep it simple. Meat and veg. Right. Cooked separately. I don't want any I don't want cook near the breaded stuff. You know, ideally if you're having to eat out, you would call ahead and figure out which restaurant might cater more to the lifestyle, which restaurants are going to serve organic.

I always say go eat where there's a chef, not where there's a cook. There's less mistakes. Chefs take more pride in their in their food, and cooks are generally just a hired gun.

They're going to cook whatever recipe that is, you know, on the menu. The other reason I say eat where there's a chef and not a cook is because chefs use real ingredients, and cooks generally use food that's delivered from the back door from Sysco.

And if you know that big food conglomerate, you know, the chicken breast they're delivering is probably more likely going to be chicken parts that are glued together by meat glue.

And so meat glue has actually been shown to irritate people with gluten sensitivity. So you could eat what you think is a chicken breast that's actually like a chicken hot dog.

If your chicken breast tastes like a hot dog, you know you're getting meat glue. And that's something that will irritate or exacerbate, celiac or gluten sensitive individuals.

So eat where there's a chef call ahead. That way you don't get there and you're the hold up. Now a lot of people get embarrassed. So I don't want people to fuss over my diet needs.

We'll call ahead. Look at the look at the menu, know what you're going to order. And that way when you get there, you can be concise with the waiter and kind of get get more, more of a feeling as to whether or not you even trust the food.

The other thing you could do, too, and one of the things I do is, I take a food suitcase. I mean, I'm packing beef jerky, sometimes dried fruit. And it's things that are easy that have a longer shelf life that if I get in a bind and I'm going to do some fasting on that vacation, you know what I mean?

Like I'm going to do a little bit more fasting and I'll have some of my own food that I know I can trust that I'll eat. And

if I come across a restaurant or two here or there that I know is going to serve organic fare and give me the same options with where I feel comfortable, I'm not getting massively cross contaminated.

I might I patronage those types of places. Yeah, I agree, I think it's really important to, do some research on the front end that will save you a lot of time.

And then also just make sure the server knows that, especially if you are somebody that has a significant gluten sensitivity. So let them know in the front end, like, hey, I have a significant gluten sensitivity.

I really need to make sure that the food I'm consuming doesn't have it in it. And, you know, they'll obviously scramble around to make sure that, you know, that they're cooking your food kind of separate from, from other people.

Because the last thing a restaurant wants is, you know, an ambulance showing up at the front door. Not good for business. So, Yeah, they'll make amends for you there.

Now, what are some key supplements that you find, especially on the front end? Like somebody that maybe that's had maybe a diagnosis with celiac, right.

That, or somebody that's just, you know, is dealing with gluten sensitivity and they've got a lot of gut issues. What are some of the main supplements on the front end that you think can really support that person as they're initiating the healing process?

If we're guessing without tab guessing. Yeah. Yep. Hands down a multivitamin, a high quality multivitamin because you want to just get kind of a shotgun of everything coming into you because of the years of gluten induced malnutrition.

Number two and omega three fatty acid with a higher concentration of EPA and DHA, not cod liver oil, because if you do cod liver oil, you get a ton of DHA, but you won't get hardly any EPA.

What ratio do you like? Like a 3 to 2 kind of EPA ratio, or a 3 to 2 or even 2 to 2? Something closer to equal, but not not very heavy. And then and then the other thing that I would suggest is B12, I mean, just based on the level of, of deficiency, the commonality of the deficiency, because it's, it's super common.

Actually, gluten in a number of studies has been shown to damage parietal cells in the stomach, which destroy the ability to make intrinsic factor. And so B12 being, you know, needing intrinsic factor for its absorption, it's kind of got a unique mechanism in regards to that.

So B12 is very important as well. Other supplements that I would suggest a good gluten busting enzyme. I have something called gluten shield that we use that is designed to degrade gluten.

Should you be eating out or going through your learning curve? And let's say you got cross-contamination, you didn't know, but you took the enzyme on the front end of the meal that just basically helped protect you and break that gluten down, that that potential for accidental exposure is very important.

And then, you know, beyond those things, a lot of people with gluten sensitivity have a lot of damage to the GI tract. So a good quality digestive enzyme might also be, a good idea for those individuals.

Just so that they can start digesting and absorbing the nutrients from the real food, the non gluten food that they're going to start eating. And that way because I'm a food first kind of a guy, I think you've got to have food right.

Supplements are supplemental to good food. You can't eat bad food and take a bunch of supplements and expect that your health is going to be superior, or so the enzymes themselves at the front end can that can be very, very effective and helpful at helping you get the most out of the real food that you're eating.

Yeah, for sure. And then, you know, there's some gut soothing agents too that can help be supportive, like things like L glutamine, d glycerin, licorice root, aloe vera.

You fan of things like that? Yeah, actually, I have a I have a formula with a lot of those different needs. L'Agence to kind of help code and line the GI tract for those individuals who are really struggling in that way.

And then another strategy to and I know you're aware of this one is fasting. Oh yeah. Is fasting is one, you know, one of the quickest ways to help the gut heal non supplemental is just letting it rest.

Right. Don't irritate an already irritated GI tract. And sometimes the act of eating itself is the irritant when the gut is trying to recover. So that can be helpful.

Resources, Recipes, and Closing Remarks

And then vitamin C is one of my favorite. One of the things I'll do if somebody gets gluten exposure, one of the things we have them do is flush out their bowel with high doses of vitamin C, and the way we do that is it's basically it's it's and we do it in a powder form.

So don't try this with pills. If you're using a vitamin C pill, you'll be miserable. Use a powdered form. But six grams of vitamin C every 15 minutes, mixed in three ounces of water, on an empty stomach, of course.

And stay home, like, because you're going to start going to the bathroom and going to the bathroom aggressively. It's like prepping for a colonoscopy.

So if you're like trying to go to work and do this, you're going to be back and forth to that bathroom. You might have an accident. So do this if you're staying home.

But flushing flushing the ball out with vitamin C does two things. One, it helps flush out any gluten. You know that you were exposed to. Number two, there are studies that show that vitamin C, actually, there are cell studies that show that without vitamin C, gluten damaged guts have a harder time healing.

So saturating the GI tract with vitamin C gives it a nutrient that's really, quite beneficial at healing the damage. And so that's why it's one of my favorite, you know, things for people to do post accidental gluten exposure, to help them get back on track.

Yeah, that's a really great tip. And this has been a fantastic interview, doctor Osborn. So many great, great, tips here and so many great, great information when it comes to really understanding gluten sensitivity.

And I know you've got your book, No Grain, No Pain, which is fantastic book that I recommend all the listeners go out and get no grain, no pain. Where else can people find out more about you?

I know you have the Gluten Free Society. Where can people access all your resources there? Yeah, gluten free society, dawg or.com? Either one. You know, we have we have tons of resources, thousands of videos and articles that you can read and just type in what you're looking for related, related to gluten, and you'll probably find an answer if you don't email us, because we want to make sure that we have all the resources on an ad.

And if there's something that we're missing that you need an answer to, we want to we want to be able to help you with that. And, and then number two, we have a master class.

So, so gluten allergy, the master class. And if you got a gluten free society, it's free. You just sign up for it. It's absolutely free. You can take it.

It's a 14 hour long master class. It'll did you everything you ever wanted to know and more about how to go gluten free the right way. Awesome. Well, again, thanks so much for your time, your expertise here.

Always enjoy our conversations and guys definitely go out. Check out no grain, no pain, check out Gluten Free Society and check out his masterclass and we'll see you all in a future presentation.

Be blessed everybody.