Aches, Fatigued, Addicted to Gluten?

Learn How to Heal Your Gut & Detox Your Body

With Dr. Tom O'Bryan

James: Dr. Tom, it's great to have you here. Great to chat again. It's been a few years since our last conversation and much has changed and evolved in the world, and yet we still have a major issue, and that is the fact that modern industrialized food production, in particular, high gluten containing grains is causing an issue for so many people. **So what is gluten and why does it cause so many issues for people?**

Tom: Yeah, that's a big question. Well, gluten is a family of proteins. There are many different gluten proteins. There's gluten in wheat. There's gluten in rye and barley, and rice and corn, quinoa. But there's a family of gluten proteins in wheat, rye, and barley that no human can digest. And bottom line is our immune system considers it an assault. Every time you eat wheat, well, let's just dive right into it.

We have the same bodies as our ancestors thousands of years ago. Same kidneys, same heart, same immune system. We use our brains more, but physiologically we're the same. And the people who survived our ancient ancestors, they were nomads. This is before farming. They were nomads. They followed the herds, and their top priority was food and then reproduction, right? But first was food. So they look around, they find something first, they sniff it, then they nibble at it. If it seems safe, they'll eat it. If there was pathogenic bacteria, bad bugs on that food that weren't recognized, we have centuries standing guard just inside the first part of the small intestine, actually throughout the entire body.

But for today, we're talking about in the first part of the small intestine, they're called toll-like receptors. I think of toll-like receptors, like the guards at Buckingham Palace. Those guys with the big hats they're as stiff as can be. They look dormant, but don't mess with those guys. Do not mess with those guys. And that's what toll-like receptors are. They really don't do much of anything in general unless they see a threat. And their job is to scan everything that comes out of the stomach. Is there any bacteria here? Is there anything it looks like? And when they see something that's a threat, within five minutes, they've activated the increased production of a protein called zonulin, which creates what we've heard leaky gut. And the reason for that is that when the cells open up the space a little bit, the leaky gut water comes into the tube, the lumen of the intestines, water comes in to wash the bug out with the poop.

Leaky gut is not bad for you. Excessive leaky gut is bad for you. It's a lifesaving mechanism.

That's the first thing that toll-like receptor does when it senses a threat. The second thing it does is it activates NF kappa B, the major amplifier of inflammation in the body. He's like the desk sergeant in the police station delegating all of the patrol officers where they're going that day. That's NF kappa B. And he activates all of this inflammation inside the gut. All of that happens within 5 minutes of toll-like receptor, identifying a threat.

Now, here's the kicker. And this comes from Harvard. And there are many, many studies on this. No human can digest wheat completely down to each amino acid, which then is harmless. And the body uses for protein for building new muscle cells and bone cells. No human can digest wheat completely. If you think of a pearl necklace, if that's a protein, and our digestive enzymes are scissors that snip that pearl necklace smaller and smaller and smaller until you're down to each pearl. The pearl necklace is called an amino acid.

No human can digest the proteins in wheat. It's impossible. The result is you've got these clumps of amino acids, they're called peptides from wheat. You eat it, it gets broken down into these peptides. The peptide comes out of the stomach into the first part of the small intestine, and toll-like receptor says, look a bug. And it gets activated right away.

So Professor Alessio Fasano at Harvard, very famous guy, just top of the field, his language is, gluten is misinterpreted as a harmful component of a microorganism. And this is what they're teaching at Harvard now. At Harvard Medical School, wheat is looked upon as a bug. And because it's structure, the amino acid structure, of these poorly digested proteins looks like the outer shell, the amino acid structure, outer shell of a bug.

And Maureen Leonard, famous gastroenterologist at Harvard did a literature review on this topic. She looked at over 60 studies and her conclusion, gluten activates transient intestinal permeability in every human who consumes it. So anyone who's listening here today, if you're a human, this means you, without exception. It doesn't matter if you feel bad or not. And there's a whole discussion we can have about that. But that's why gluten is such a problem, is because our bodies can't digest it completely. And what's left of the remnants of the food looks like the amino acid structure of a microorganism. So our immune system gets activated in every human.
I welcome people to argue with me on this. Just read the science. And you can't.

James: Well, Tom, I think what's really interesting about what you're saying here. A few comments, first of all, is that this idea that an increased inflammation response, and even the permeability of the intestinal wall, which is leaky gut, is actually a healing response.

Tom: That's right.

James: It's good. However, there's so many other instances where we come to see healing responses as the problem. For instance, alpha sclerotic plaque is a healing response to repair the

arterial wall, right? A tumor is a healing response to contain and isolate an overgrowth of cells, but we see these things as inherently the enemy, but it's the body just hyper intelligent. **Now, tell me, where does this become a problem? You're saying that when it crosses over from an immediate response or a short-term response into this long-term response where it's chronic in nature. Is that correct?**

Tom: Yes, it is. It's lifestyle. Bottom line. It's lifestyle that no humans in history have ever been exposed to the amount of toxins that we are exposed to every single day, multiple times a day. We've heard all of the studies. I mean, every woman uses on average over 180 chemicals on her body every day. Every man, it's 120. And the response from the industry on it? 'Well, there's no evidence that the amount of toxins from your cosmetics that leach into your bloodstream is toxic to humans.' How did they get away with that? How can they say that?

It's because of the toxic substance control act. When it was passed, and there was a big hullabaloo. 'Don't do it. No, no, you can't do that.' But it was passed with the guidelines that any exposures you have, you have to demonstrate a detrimental effect on humans within 24 hours of exposure. And the amount of phthalates you get from drinking water out of a plastic bottle is not toxic to humans. It is not. The amount of mercury that you get from eating tuna fish, because almost all tuna has mercury in it. The amount that you get is not toxic to humans. 'Well, there's no evidence that the amount of mercury that you get in your bloodstream from eating tuna fish is toxic to humans.' And that's how they get away with this.

But it's the accumulation of these chemicals inside your body. Let me give you one study, if I may. Chicago, 2016. 346 pregnant women, 8th month of pregnancy, they collected urine. They measured 5 phthalates, and there are many more. They just measured 5, one of them being bisphenol A or BPA, that people have heard about. Phthalates are chemicals used to mold plastic. And they measured it, and they put the totals in fourths. The lowest, the next, the third and the highest. They then followed the offspring of those pregnancies for 7 years. When the children turned 7 years old, they did Wexler IQ tests on them. The official IQ test.

Now, there's not much in medicine. It's all or every, but this was every, every child whose mother was in the highest level of phthalates and urine in pregnancy, compared to the children whose mothers were in the lowest level of phthalates of urine in pregnancy. Every child in the highest level, their IQ was 7 points lower on average than the kids in the lowest level of phthalates. Now, that doesn't mean anything to anyone until you understand a 1 point difference in IQ is noticeable. A 7-point difference is a difference between a child working really hard, getting straight A's in school, and a child working really hard, getting straight C's in school, working really, really hard. But this child doesn't have a chance in hell, excuse me, of ever thriving with brain function because her brain never developed properly.

Now, just go on Google and type in phthalates and neurogenesis. Here come the studies. But there's no evidence that the amount of phthalates that leach out of your nail polish into your bloodstream is toxic to humans.' That's how they get away with this, James. And every year, the chemical industry spends millions in lobbying to make sure nobody touches the Toxic Substance Control Act of 1976. That's when they passed that. So for 50 years, almost 50 years, that's been the guiding federal legislation on chemicals being introduced into our environment.

James: It's incredible. And I think, one of the things that's troubling about it as well is they hardly consider toxins in cocktail or in unison with other toxins.

Tom: That's right, 1 + 1 = 7. When you've mixed some of these chemicals together, and it's just overwhelming. But that is why there is such an increase in sensitivity to wheat now than there ever has been before. There's been a 5-fold increase in celiac disease since the 1950's, 5-fold increase. And it's not because we're eating more wheat, and it's not glyphosate. Glyphosate wasn't introduced to the market till the mid-90's. It's that we are more accumulated with toxins. So our threshold is less. So a little bit of insult has a greater effect. Our immune systems that are hypervigilant, just on edge all the time, fighting the mercury that's in your brain cells, fighting the arsenic that's in your bone cells, fighting the lead that's in your bone cells.

The immune system is so hypervigilant all the time that it sees this offending agent of gluten, which is transient. It says, ah, fight that thing. And now you get this big explosion in your gut, coupled with the development of the microbiome. Nothing is more important than the microbiome. I'm going to give you a couple of mind bending statistics here. We are born as humans. We are born 99% human. Babies have a little bit of bacteria at birth from mom, not much, but a little. But we die 90% bacteria.

That the ratio of how many human cells to.. because you've heard that there's 10 times more bacteria in the body than human cells. But we never put two and two together. We're born 99% human. We die 90% bacteria. So it's the relationship with the bacteria. This is the dance of life. This is truly the dance of life. And the more toxins this body accumulates, the more pathogenic inflammatory bacteria thrive. And the good guys, the good bacteria get reduced, reduced, reduced.

One more statistic. 36% of all the small molecules in the bloodstream are the metabolites. I call it the exhaust of the microbiome. 36% of all the small molecules in your bloodstream are messengers from the bacteria in your gut circulating through your bloodstream. Your bloodstream is just a highway. It's got a lot of traffic, but it's just a highway. Everything's going the same direction. It's just escorting things everywhere. And over a third of all the small molecules are the exhaust from the microbiome. If I exercise too hard and my muscles are sore the next day, we all know that's lactic acid. I push my muscles harder than I should have. Okay, drink some water, you'll be fine. Lactic acid is the exhaust of your muscle cells.

Your bacteria has exhaust. And that exhaust makes up 36% of the small molecules in the bloodstream. So when you have too many bad bacteria in your gut, the technical term is dysbiosis. When you have too many bad guys, the exhaust of the bad guys in your bloodstream are messengers of inflammation, and you get more inflammation. So the environment we're exposed to creates this pathogenic, this bad environment in the gut. Too many bad guys, not enough good guys. The messages in the bloodstream are messengers of inflammation, activating genes of inflammation, and we're left in a chronic inflammatory state. Now, it turns out the most powerful environmental trigger activating genes of inflammation, the most powerful one is what's on the end of your fork. So it's our choices on a daily basis that has the greatest.

Now, you could be living in a moldy house, and you're getting 24/7 of mold going right up to your brain causing brain inflammation. You're breathing the spores all day, and you may not feel bad, but you're killing off brain cells. But in general, the most powerful contributor is what's on the end of your fork. And wheat is the only food that is misinterpreted by our immune system as a harmful component of a microorganism. It's the only one in that category. There's nothing else. There are other foods that can cause leaky gut, of course, for different reasons. Dairy sensitivity, soy, egg, lectins. But wheat is the only one without exception, every human.

James: Yeah. I mean, a couple of things that you mentioned at the start here really, are quite new to me. First one, Tom, was this idea that, in my mind, I thought that it was the proliferation of adulterated modern food that was causing or contributing this chronic inflammation response. But you are taking it a step further back. You're saying it's the toxins that we have released.

As David Wolfe told me in 2007 when I first interviewed him, he said, we have released wholesale into the environment, tens of thousands of toxic chemicals. There was over 44,000 at that time that he mentioned man-made chemicals that have made their way into every area of our life. Like you mentioned, cosmetics, in foods, processed foods in all these different areas. And you are telling me that this is the precursor that initiates the dysbiosis that then initiates the reactivity to all of these foods, which is, that's a very interesting connection. I thought that they were a little disparate. So that's something.

Tom: Yes, it is. And when you read the science, it's irrefutable. This is not my idea. And when you read the science, wow, that just makes sense. Okay. Okay. I understand that. So you look at your shampoo, if it's not organic, throw it out. Don't use it up and say, well, I'll buy some when I use it. No, stop putting the toxins on your body. Everywhere that we can reduce exposure is going to be of benefit for us because it's so prevalent. I'm sitting in a hotel room right now,
and this table is pressboard. It's not solid wood. Well, pressboard is soaked in formaldehyde.
So it's outgassing formaldehyde we sleep on in our beds under sheets and under blankets that have been soaked in flame retardant chemicals that outgas into the air, just these minute.

'Now, there's no evidence that the amount of flame retardant chemicals that outgas out of your blanket is toxic to humans.' That's what you're up against when you try to talk to the scientists on this who work for the chemical companies, because they hold the party line on the guidelines of defining toxic via the Toxic Substance Control Act. And the sheets are outgassing these flame retardant chemicals. After a hundred washings, they still can identify traces of chemicals that you're breathing all night long. You need organic sheets. We have to learn how do we begin to reduce our exposures to all of these toxic chemicals that accumulatively, as you said earlier, is 1 + 1 = 7.

James: Yeah. And so that's a great piece of advice. And it can be also challenging in the modern world. Like we move around in all these different environments and we travel, but we can do our best. I can understand that.

But what advice do you generally share with patients who may be suffering from, say, autoimmune conditions or gut issues or signs of chronic inflammation, or leaky gut that you know now with the meta research and analysis that you've done, is connected to long-term toxic overload? How do you facilitate some form of a detoxification process for people? Is it as simple as, juice cleansing, or water fasting, or dry skin brushing, or sauna? What are your top sort of recommendations for people to get on top of this? To stop. You're saying this is the upstream, causative contributor to all the flow, everything that comes down. **So what's your recommendations here?**

Tom: Well, there's two concepts, and the first one, the most important one is to live from the principle, 'base hits, win the ball game.' It is all the little things you do on a daily basis that accumulatively will change the direction your physiology is going. There's no one magic bullet. Well, what do I take to detox? Do I have to take it for 3 weeks? Really? No, detox will take 6 months to 2 years. It's critically important.

My next book will be, and I don't have the title yet, but the working title is Healthy Conception, Healthy Pregnancy, Healthy Delivery, Happy Baby. Because our babies are being born today, with less than their optimal brain function. Because moms are so toxic and moms don't know that they're toxic. They just don't know. So the the first step is to understand the principle. All the little things you do will make the difference. And the subtitle to my book, I wrote a book called You Can Fix Your Brain. And number one in 7 categories on Amazon for brain function. I'm very proud of that. But the subtitle is, Just 1 hour a week to the best Memory, Productivity, and Sleep you've ever had. And that's the only way I believe people can be successful at this.

Mrs. Patient. every Tuesday night after dinner, every Sunday after services, whenever it is. But you target every week the same time, and you tell your family, don't bother me, I'm spending an hour so we can learn how to be healthier. And then you do a little bit of research, but just for that

one hour. But you go back to my book where I give you three URLs to order glass storage containers, because plastic storage containers leach phthalates into the food. Hundred percent. The next day, your leftover chicken has phthalates in it.

James: That's why I use it. Every time.

Tom: There you go.

James: Only thing I have in my house. Big one, small one. Exactly.

Tom: Exactly. Yeah. Yeah. So you go to the 3 URLs, Miles Kimball, Amazon, or whatever the third one is, I don't remember. And you look at those and, those are okay. Oh, I like those. And you order 3 round ones and 2 square ones, and one for the pie, you pay with your credit card, hit send. It took an hour, but you're done for the week. You're done. You'll never poison your family again with minute amounts of poisoning of phthalates in the food that you're giving them. And then next week you go to nail polish and you find organic nail polish. And then next week you go to the handout on my website, my website's, the dr.com, and you do the dr.com/plant, and you get the handout from NASA. From NASA on houseplants that absorb 74% of the toxins in the air.

James: Yeah. Wow.

Tom: And they showed that two 6-inch house plants in a 10 x 10 room absorbs 74% of the formaldehyde, and the flame retardant chemicals, and all this stuff. So you go out to the store and you buy 20 houseplant for the 10 rooms in your house. And if you say, oh, I'm not good with plants, they're going to die, then you buy more. But the idea is every week you do one thing, you spend an hour, and in 6 months you've completely changed your lifestyle. And it's not stressful. You do it in a way that is manageable. So on the topic of detox, there's so much to learn. I mean, it's not a simple, well just take this super detox product for three weeks and you're fine. But the one..

James: Do you promote, sort of metabolic processes for detoxification, like water fasting?

Tom: Oh, Sure. You bet. You bet.

James: Or do you suggest physical therapies like lymphatic drainage or dry skin brushing, or even infrared sauna or traditional sauna or cold exposure? Like, what are the most researched? Because you're a very research-based, expert in this space.

Tom: I understand your question. I would just rephrase the question. I would take the word or out of there, and put, and. Infrared sauna, and cold plunge, and walking. 9,826 steps a day is the magic number. In the journal of the American Medical Association, you walk just under 10,000

steps a day, 9,826. You walk 9,826 steps a day, you reduce your risk of dementia by 51%. And they followed tens of thousands of people for over 30 years on that study.

So, that's a part of it. You want to mobilize. You wan to get.. and you don't have to go to the gym and spend lots of money. Go for a walk. But, that's a part. But the primary thing to begin with, in detoxing, we have to hydrate. You have to hydrate well enough to escort the toxins out as you begin to mobilize. And the only time you do not detox, except get better hydration, is when you're pregnant or breastfeeding. No active detoxing during those times. That's why it's so important to me to reach women of childbearing age. So they do this before they get pregnant. If they're newly married and they're looking to start a family, great. Talk to your husband 6 months of, make sure we don't get pregnant while we're doing active detoxing.

Then you just do the deep dive-in pretty aggressively. But in general, for people to transition their body's metabolism one hour a week, to learn how to apply one more of the principles. In my book, there's 36 principles for detoxing, for reducing the environmental triggers. And I could easily entitle that book, You can fix your kidneys. Or, You can fix your joints. But, the mechanism is the same. It's just the same that the Center for Disease Control tells us that 14 of the 15 top causes of death are chronic inflammatory diseases.

Everything, except unintentional injuries, is a chronic inflammatory disease. So the primary focus is to understand this and then ask the question, how am I throwing gasoline on the fire? And then you become, really, really, my nail polish? Really? Really? My plastic containers. Really, really, the bed sheet. Really? Oh. And it is so overwhelming for people. That's why it's one hour a week.

And you just learn all of the steps that James just referenced in his question. Because obviously infrared saunas are excellent, to flush out toxins that are in your tissue. Of course. They were. There are many, many studies on that. It's irrefutable. Yes. Cold water plunging is the most powerful thing I've ever seen to transition someone's metabolism quickly. Yes, of course, Valter Longo has done so much first tier research on intermittent fasting, and fasting mimicking diets and how beneficial they are. But at this stage in human existence, there's no one magic bullet. It's a transition in consciousness that has to occur.

James: Yeah. It's a very powerful concept you make and it is a transition in consciousness that needs to happen. I believe in this concept, and this is why I've been so focused on education and documentary films of which you're featured in transcendence. Thank you for your incredible contribution there. And the way that you describe the shag pile carpet, it's so visual. It's so easy to understand. And, because education has the capacity to shift beliefs, and beliefs shift the choices you make on a daily basis, and the choices you make on a daily basis impact the quality or not of the outcome of your life.

Tom: Exactly.

James: Ultimately, education though, has become beholden to corporate interests, to advertisers, which is predominantly pharmaceutical companies in the US. And it's beholden to the interests of the shareholders, of these media companies, if it's not a member supported organization. And then furthermore, we have cancel culture happening in this sort of modern post-covid developed world of global media.

And this sets us up, Dr. Tom for a situation where people are under informed. And so, getting access to your books, getting access to our films, getting access to platforms like Gaia, whatever it might be, becomes a revolutionary act, as opposed to something that is the normal for helping us be good humans on planet Earth. So we have a sort of deeper systemic issue here, but the reason we're doing this is to help people get access to this information. If I had to think about something. So it's a really interesting frame here about the toxins causing these chronic inflammation and leaky gut, which rolls into a whole host of illnesses. Autoimmune conditions, which is just a litany of modern problems of which many people suffer from. But people still will come and say, but why, why is it so hard to give up gluten? Why it's so addictive?
There's something about it I just cannot give up. And then why is it that when some people go to Europe, they have less problems? And you've also spent some time in Italy as well.

And so can you explain the addictive nature of some of this gluten and why it's so addictive? And then why is it different when people travel to another part of the globe and eat the same product?

Tom: Yes. Let's do the European thing first. So the science has become very clear that the gut symptoms associated with wheat, and there are many, but the gut symptoms are mostly comin from a component of wheat called the FODMAPs, not from the proteins in wheat. FODMAPs are fermentable carbohydrates. And when you have an imbalance of the good guys and bad guys in the gut, and you eat wheat, you can get bloating and gas and discomfort. That's from the FODMAPs, not the proteins, not gluten or any of the other proteins. It can be from gluten, about 8% of people, according to science, it's the gluten that causes the GI symptoms. But the vast majority of people, it's the FODMAPs in wheat. Really easy to understand because the wheat in Europe is much lower in FODMAPs. So when people eat pasta in Italy, they don't get the bloating and the pain that they do when they eat pasta in the US. So they, oh, I can eat the wheat there, it's good for me. No, it's not. It's not because your immune system fights the proteins. So the inflammation that comes, the recognition of the harmful component of a microorganism of wheat and activating the immune response, that comes from the proteins. And the proteins of the wheat in Europe are just like the proteins in the wheat everywhere else. So you still get the immune response, you just don't get the gut response from the wheat in Europe.

James: Got it.

Tom: And I've talked to patients about this for years, and they'll come in, we do our tests, we identify how bad their immune system is fighting wheat. They go squeaky clean, they follow our protocols, they put their autoimmune diseases in remission. They feel great. The antibodies to their joints for rheumatoid down, the antibodies for their thyroid, Hashimoto's are down to normal with gluten-free diet being a really important component of all that. And they say, Well, Doc, I'm going to Italy. Can I eat the pasta there? No. But I remember when I was there, I didn't feel bad. Well, it doesn't matter how you feel, it's really what's activating your immune system. But I felt good over there. I said, well, here's what we can do. We just did a repeat test and we showed your immune system is not fighting wheat. Way to go. Your symptoms are in remission right now. Way to go. Just did the test. Great. Go to Europe, eat everything you want, and when you come back, we'll test you again. And we'll see. Every single time, the Hashimoto's antibodies are back, the rheumatoid antibodies are back. The gluten antibodies are back, every single time without exception.

James: Yeah. That's a new way to look at it and I thought that the feeling would indicate the immune response. But you're saying that's the FODMAPs component of the gluten, which is lower in Europe.

Tom: That's right.

James: So you have less of the bloating.

Tom: That's right.

James: Less of the gut issues, and maybe I would say, because I've had many friends notice this, less of the skin issues because the skin gut is the same. But you're saying the immune response is still there because it's still reacting to the proteins in the wheat.

Tom: Exactly. And so your brain antibodies are still elevated, or your thyroid antibodies are still elevated, killing off your thyroid wherever your genetic vulnerability is. In Italy, they've got 36 centers designated by the government as gluten related disorder centers. And when a doctor thinks their patient might have a problem with wheat, they send them to one of these centers. They're all over the country, 26 or 27, or gastroenterology, some pediatrics, some psychiatric they're all over. And because if they get a diagnosis of a problem with wheat from one of these centers, their food's a tax deduction.

So in Italy, there's encouragement to go to the proper centers for this. They show that, when patients that have health complaints are sent to their centers, 7% of them turn out to be celiacs. 93% are non-celiac gluten sensitivity. And in terms of the presenting complaints, one out of eight has gut problems. Seven out of eight. It's their joints. It's their skin. It's their brain. It's their eyes, it's their liver. It's not the gut. So if you're looking to how you feel when you eat wheat, or any food

to determine if it's okay for you or not, you'll get it right one out of eight times. You'll miss seven out of eight.

James: Oh my god, that's so profound. Can I share something with you? So I'm an avid surfer, have been my whole life. And I had a surfing injury in Bali about a year and a half ago. And it was a pretty radical injury. I'm a pretty radical style surfer. It's been one of my life story's sports. And I had a pretty wild inflection of my knee joint, and it was very painful. And I had to go back to Australia with a wheelchair on the plane. And, I went through a process of not needing surgery. So I rehabbed the knee. And it's been some time. I have now the perfect barometer for when my body is experiencing inflammation. So if I ever have a beer, which I don't really drink anymore, or I have a small amount of gluten, which occasionally, I'll call it gluten-day, Tom. Where like once every few months I'll be, okay, this is just what it is. I'm here. I'm going to have some.. Immediately my knee is like a barometer and it goes straight off the next morning. It hurts. And so, in a way it's become this perfect ally for me. Instead of having like a continuous blood glucose monitoring equipment, I have a continuous inflammation monitoring technique. Right?

Tom: That's great. That's great that you had it, it's a real blessing.

James: Yeah. Because you know when you've pushed the boundary too far. Yeah. But, what you said is very interesting. Like, I think a lot of people associate gluten sensitivity, which many people identify as, not because it's trendy, but because they noticed, but they associate it with gut issues and not pain, not eye issues. It's one out of eight. Not skin issues. And that is a really big.. I mean, I always learn so much when I speak with you, but that is profound. And I think maybe just explain the other seven out of eight. **Give me the list of common things that happen as a reaction, because I think people might have missed the importance of this point that you made.**

Tom: Number one is the brain. The brain is most often a tertiary neurology center. It's a center. Patient goes to see their doctor. They've got a complaint in their brain, whether it's their child, has seizures, they have migraines or they have depression, whatever it is. They go to their doctor. The doctor recommends something, they go home, they take this prescription, it doesn't work. They come back a few months later, still suffering. It didn't work. The doctor gives them something else, maybe. Or eventually he sends them to a neurologist. The neurologist gives him something stronger. It helps a little bit, but you don't like the feeling of the medications or it doesn't help much at all. You go back, if it's a smart neurologist, he sends you to a tertiary neurology research center if he has access to one. Now, these are the geeks of geeks. These are the neuro neurological Sherlock Holmes. These guys and women, they just dive in. They've got all these fancy tests they do.

And so the study I'm about to tell you comes from a tertiary neurology center in Sheffield, England. They identified that when the cause of a patient's symptoms is identifiable, what they've

got, if they can put a name to it, 5% of those people have elevated antibodies to gluten, 5%. When the cause of the patient's complaints cannot be identified. We don't really know what this is. 57% of them have elevated antibodies to wheat. And they put them on a gluten-free diet. They get better. It doesn't matter if it's ataxia, spinal, cerebellar ataxia. It doesn't matter what it is. When they can't figure out what it is they put them on a gluten-free diet. Kind of a shotgun approach.

Well, first they do a blood test and then they put them on the gluten-free diet. They get better. It's jaw dropping. So the brain is the most important system of the body for sensitivity, because when you've got leaky gut, because you've got all this inflammation going on, and the toll-like receptor say that's a harmful component of a microorganism. They activate leaky gut, the inflammation of the gut. When you have a leaky gut, if it stays long enough, you also get a leaky brain. When you get a leaky brain, that means these molecules are getting into the bloodstream that shouldn't be there.

And we have four different immune systems in our body. We have the immune system in our gut, that's the largest, 70%. They're like the sheriff in town. They've got a six gun back in the old wild West. They keep the peace with their six gun. You've got the immune system in the bloodstream. Those are high powered rifles, sniper bullets. They're the Marshall, that covers a number of towns, and they're on the roads and all that. And then the immune system in the brain. Those guys have bazookas. They don't mess around. Anything that gets in the brain. They're called the glial cells. Anything that gets into the brain, they fire their bazooka to destroy it immediately to protect the brain. And that's a really good thing. We wouldn't be here if we didn't have that. Our brains wouldn't be able to develop. The problem is, you have toast for breakfast, sandwich for lunch, pasta for dinner, leaky gut, leaky gut, leaky gut, leaky brain, molecules get into the brain, the glial cells fire their bazookas. Big explosions going on all day long in the brains, like fireworks going off all day long in the brain, collateral damage occurs. Now you've got a brain dysfunction from that. So, the brain is the most common system of the body that's affected. After that, what we're finding is the reproductive system, where the tissue is so sensitive, that's affected dramatically. Lots of miscarriages, stillbirths, failure to thrive for children. Lots of that.

James: Yeah. I mean, there was one researcher when I first started studying nutrition and natural therapies, about nearly 20 years ago now. And his name was Dr. Abram Hoffer. And he was from Canada.

Tom: I know Abram. Yes.

James: And, I believe he had an 85% success rate in curing schizophrenia.

Tom: Schizophrenia. Right.

James: Yeah. And I interviewed one of his colleagues who was an Australian professor from the Australian College of Nutrition and Environmental Medicine. Professor Ian Brighthope. And he was also using a lot of his work. And he was telling me how he'd go into mental hospitals, and they would have people there suffering from schizophrenia and other serious mental conditions. And they would be given bread with Vegemite and a glass of milk for their like lunch. And so, bread is obviously gluten, Vegemite, many people may not know this, but it's basically yeast. It's a type of spread in Australia. And then milk is dairy. And one of Abram's key approaches was first test for allergic responses to different foods and eliminate those food groups, of which most of the time it was gluten, dairy, eggs, soy, corn, et cetera. The most common allergens. And people just start getting better. It's that easy. And, it seems ludicrous. And you have the American Schizophrenic Association, I believe that's the title, publicly denounced for years. This is an incurable illness. And here you have just one very humble doctor from Canada basically telling people not to eat wheat and maybe some high dose nutrient therapy, and orthomolecular approach. And they're getting better. I mean, this is...

Tom: Well, there's so many studies now, just go to Google and type in schizophrenia and gluten. Just look at all the studies. But our organizations can't change their paradigm. They're too locked in with the pharmaceutical industry most of the time. And so they can't endorse these simple things. And there's so much science on this now, it's irrefutable.

You also asked about the addictive quality. And because you mentioned schizophrenia, for some people, the immune response they have is for a component in wheat called the gluteal morphines. And in dairy it's the casomorphines, and these families of compounds bind onto the opiate receptors in your body. So it's a feel good. And every time you have a gluteal morphine molecule binding onto an opiate receptor, it's a feel good response. Oh, I don't need to eat grilled cheese sandwiches. I just like them. That's how we rationalize it.

And for people, when you do the proper testing and the test in the world, and I think you know, James, I lecture around the world a lot. I was in Brazil in October and Rome last month. The best test in the world. So I'm looking everywhere for testing to see what's out there. It's called the wheat zoomer because you zoom in on the problem and it looks at 26 different components of wheat. Very comprehensive and very accurate.

So when people have elevated antibodies to the gluteal morphines, or another categories called pro dynorphins, then we tell them, Mrs. Patient, you're likely going to have a little more difficult time giving up wheat. There might be some kind of addictive quality here. So let's just start with two or three breakfasts a week that are gluten free. And transition to every day once you've got that down, and maybe one or two lunches a week, but let's just transition you as opposed to going cold Turkey. It'll be way too hard for you if you go cold, cold Turkey, you might be able to do it, but there's no need to suffer. Just listen to your body and move at a pace that you feel safe at.

James: I like that.

Tom: So, the addictive quality is especially because of the gluteal morphines and the pro dynorphins.

James: Got It. That makes sense. So, I'd like to sort of finish on a final question here. And of course, I want to encourage people to get your books, and keep an eye out for your new book coming out. And to continue educating themselves, whether it's studying nutrition with Food Matters, or potentially becoming a gluten practitioner. You can go to doctor.com to find out more about Dr. Tom's work. But final sort of question here would be, one thing you framed up front, which was sort of a new angle for me to hear from you, is that the toxins are causing a breakdown in the gut bacteria.

So we spoke about, which then leads to this cascade effect of chronic inflammation and so forth, and reacting to all these foods that we're eating. So we spoke a little bit about detoxification, but **what are some of your sort of core tenets for improving bacterial health in the gut, save for the toxins? So that's been discussed, but what are sort of some of the components that you consider for improving bacterial health?**

Tom: Sure. Some easy takeaways. First one, stop throwing gasoline on the fire. Find out what the foods are, that are inflammatory for you. Do the right testing to find out. But then, Mrs. Patient, when you go shopping, I want you to buy a couple of every root vegetable in the store. Always get organic, but get the root vegetables, turnips, parsnips, radishes, sweet potatoes. Not too many white potatoes because of the glycemic effect, but get the others. And every day you have one root vegetable, because the fiber in the root vegetables feed the good guys in your gut. They don't feed the bad guys. They only feed the good guys.

Now here's a point that requires a lot more elaboration, but I'll just summarize it for you and I hope you'll accept it as truth, without all the science right now, 78% of the prebiotic in the Western diet are the Arabinoxylans in wheat. So 78% of what people eat to feed the good guys in their gut come from wheat. Not everything in wheat is bad for you. It's just that there's more bad guys than good guys. But when you go gluten-free, which is a really good thing to do, and you start eating gluten-free foods, which are just white paste and have no nutritive value, you feel good at first, you lose weight. Your headaches are gone, your seizure stopped, your thyroid's working better. All of that feels great. But you're starving the good bacteria in your gut, because you've eliminated their major source of food.

So 8 months, 10 months, a year later, you get really sick. And actually, there are studies on mortality in celiac disease, and you have a 4-fold increased risk of mortality in the first year on a gluten-free diet. And they never talk about why. But this is why. It's because you went gluten-free,

which was the right thing to do, but you're not replacing the beneficial components of wheat that feed the good bacteria. You must eat root vegetables. And, Mrs. Patient for a couple of months, take a prebiotic supplement while you're transitioning your lifestyle.

Next one cup of bone broth, a couple, three times a week. If you're really sick, every day. Organic, of course. Why bone broth? Bone broth is high in gelatin tannate. Gelatin tannate acts like a seal on the inside lining of your gut. We've all had carpet burns on our knees in the past from sliding on the carpet. And when you have a carpet burn, you don't put a pair of pants on because it hurts anything that touches it. Well, when you've got leaky gut and the food material is going through your gut, it aggravates the leaky gut. Gelatin tannate acts as a band-aid so that the tissue gets to heal a lot faster. So a cup of bone broth, a couple three times a week.

Next, get five different types of fermented vegetables. Get sauerkraut, miso, kimchi, fermented beets, curry flavored, whatever you like. But every day, you work up to a tablespoon a day total. So my teaspoon, a couple times a day, whatever you like, of fermented vegetables, because every vegetable when fermented is producing families of the good bacteria. So you're inoculating your gut with the good bacteria. And when you get up to, it may take you a couple of months to get up to a tablespoon a day. But when you get up to a tablespoon a day, you're increasing the inoculation in your gut 10,000 fold. 10,000 fold just by having a little bit every day.

Next when you're shopping, buy 15, 20 apples organic, always organic. Wash them. Don't peel them. Cut the seeds out of them, dice 'em up, put 'em in a pot. If there's this much apples in the pot, you add water to a third of the height. I put cinnamon in there, maybe a couple of raisins. Turn it on high, boil it for 11 to 15 minutes. You got apple sauce. My wife then likes to put it in a blender. Make it smooth. I like it crunchy. But whatever you like. Applesauce is high in pectin. Pectin increases arguably the most important enzyme in your gut called, intestinal alkaline phosphatase. IAP, lowers high cholesterol, lowers high triglycerides, stabilizes blood sugar and insulin sensitivity, reduces LPS, really toxic stuff from getting into your bloodstream by over 70%. So you have a tablespoon to two tablespoons a day of fresh applesauce. The commercial stuff won't work.

Next, you want somewhere around 10 walnuts a day for an adult, for a kid, one or two. Because the walnuts feed the development of really good bacteria in your gut called akkermansia. And akkermansia is called a keystone species. Meaning that, many good families of bacteria increase when akkermansia increases. And there's more. We just go on and on.

James: That's great. I mean, I think you took like an apple a day to keep a doctor away. You're like 15 plus some cinnamon plus... That's great.

Tom: That's exactly right. So, you learn all of these little things that just become a part of your lifestyle. One hour a week to learn. Okay, he said something about applesauce. His book's got

the recipe. The brain book's got..okay. And then you go buy the apples and you make, it takes an hour to make the applesauce the first time, because you're not sure what you're doing. And your kids can help you. And they're making the applesauce, so they want to eat it. And, every week you learn one more new thing. And in six months, your friends who haven't seen you, wow, what happened to you, you look great. Well, actually I've calmed down the toll-like receptors in my gut from being in an alarm state all the time. I'm rebuilding my microbiome.
I'm doing apple, so I'm doing this, I'm doing this, I'm doing this. And the result is in six months, there's a new body here, a new metabolism, a new way of functioning. You can't keep living the same lifestyle and take some pills and expect a different result.

James: Absolutely. Tom, you're a force for good. Thank you so much for being powerful.

Tom: As are you, James, as are you.

James: You're such a powerful educator on this topic. And you really break it down so simply for people, but you also continually reference deep science and research, which I think is a real power to your work. And I really appreciate all the books that you write, and the work that you're doing and the programs that you put out, and I encourage people to go check it out. So thank you so much for your contribution and, for enlightening me further along with my journey and everyone listening to this today. So thank you.

Tom: Thank you.

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