



Transcript of “Gluten Sensitivity, Celiacs, and Bulletproofing Your Gut with Dr. Tom O’Bryan”

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DAVE: Today's cool fact of the day is that the average person's skin will weigh about twice as much as their brain does. Unless of course you have a lot of extra skin like I did when I weighed 300 pounds. Fortunately thanks to whole body vibration and the bulletproof diet and lots of hydrolyzed collagen, I don't have any extra skin so I'm pretty sure my skin weighs twice as much as my brain. What about you?

Dr. Tom O Bryan is joining us for the podcast today. Tom is an internationally recognized speaker and a workshop speaker specializing in gluten sensitivity and celiac disease. I'm really stoked because I'm one of the speakers at Tom's gluten free summit that's coming up here in November. It's gonna be really incredible. As you know on the bulletproof diet, gluten is just forbidden because it reduces human performance so much. We're gonna get a chance to talk about that.

But first a little bit more about Tom. He's kind of like a Sherlock Holmes for chronic disease and metabolic disorders and he uses functional medicine. You've heard me talk about functional medicine a lot here as opposed to western medicine approaches which are a little bit more mechanistic. In fact Tom even holds teaching faculty positions with the Institute For Functional Medicine and the National University of Health Sciences.

In addition, Tom and I have spent some really high quality time together over the past few months, more than a week, and I've really gotten to know him ,well and really trust his opinion, both as a healer and as a researcher. Tom, welcome to the show.

TOM: Thank you Dave and thank you for the introduction. It's a pleasure to be on the show with you.

DAVE: Let's talk about gluten sensitivity and celiac disease. Why do you care so much about these things?

TOM: Oh man! Where do you start? Most everyone has heard some reference to this and that it seems to be a problem for a friend or a family member and some people are saying it's a fad. That people going on the diet and losing weight, and some movie stars are doing it or some tennis pros. It's a fad, it's going to fade. This is not going to fade.

There are over 19,000 articles in the medical literature on gluten sensitivity and it's impact throughout the body. 19,000 different research teams have looked at this and said, "hey this is a problem with juvenile idiopathic arthritis. This may be a problem with Alzheimers. This may be a problem with Parkinsons. This may be a problem with intestinal permeability. This may be a problem with liver cancer.

And the articles go on and on and on that not everyone has this, but what the articles are starting to say is somewhere between 3 and 6 out of 10 people who go to a doctor for any reason, when they're checked, if they're checked properly, they have elevated antibodies to one of the properties of gluten, meaning that their immune system is saying "this is a problem." So it doesn't matter if you have headaches or seizures or attention deficit. It doesn't matter what the symptoms are. If the protocols you're currently doing are not getting the ideal results you want, you just wanna think about maybe a gluten sensitivity's contributing to this.

DAVE: So 19,000 people. Obviously they all had a vested interest, so this is a scam right?

TOM: Well, there's no money!

DAVE: I know!

TOM: There's no money in researching gluten sensitivity. There's no drug. There's no profit margin for all of these research groups. They're just saying, "Hey this is a problem!" For some people, this is a problem.

DAVE: You totally got to the heart of my question really quickly there. No one's getting rich off telling you to eat no gluten.

TOM: Right.

DAVE: I would say maybe some of the big package food companies are starting to make gluten free products that are worse than gluten containing products. Maybe they're making some money by upcharging for another crap food. But even then

some of those products are probably less harmful than gluten on the gut.

TOM: Well ya know there are people who say gluten free diets are bad for you if you're not a celiac, and gluten free diets are not bad for you. Bad gluten free diets are bad for you.

DAVE: That's a huge point and god, well put.

TOM: Yeah! Ya know, you go to Starbucks once a week. Pretty soon you'll go to Bulletproof somewhere once a week, right? And you stop every day but every once in a while, you get a blueberry muffin. Well now you're gluten sensitive "oh I can't have my muffins anymore."

Well now you're gonna find gluten free blueberry muffins and you think "Oh I can eat that, it's healthy for me, it's gluten free" It's not healthy for you! It's just not as bad for you as a gluten containing muffin. I mean, there's no reason why you can't have a blueberry muffin every once in a while. But people think Oh it's healthy for me its gluten free, I can have one. As a matter of fact, I can have two!

DAVE: Yeah.

TOM: And that's how people gain weight on the gluten free diet is eating the gluten free pre-packaged or pre-prepared products trying to substitute for the amount of sugar or the bad fats they were getting in their diet beforehand.

DAVE: So the idea that diets are not necessarily good or bad as in binary 0 1 but that diets are on a spectrum there where at least you can eliminate gluten but you can still eat like crap. Like my favorite gluten free diet is like, diet coke, maybe some pepsi—I mean those are gluten free products, let's be really clear—tequila, and corn chips! I mean it's a full gluten free diet, it's gotta be healthy right?

TOM: Well ya know, Dave, on your diet, I would join you with the tequila. I'd be alright with that one if it's good tequila.

DAVE: There ya go. But it's one of those things—oh and ice cream. You can throw some of that in there too. Why not. There's no gluten in most ice creams.

TOM: Right, in most ice creams.

DAVE: Cookie dough exceptions.

TOM: Right. There are gluten in some ice creams. Gluten is used as a filler in many different products and you'd never imagine. It's in applesauce. It's in ketchup. And you would never think—and that's why it's so important that a person really look at this and get accurate information. Work with the nutritionist or a registered dietician or a practitioner who's well trained in this. We have a whole training program for healthcare practitioners on this so that they start saying accurate information about it.

DAVE: In fact, Tom, when you go to the doctor and you ask about gluten you're gonna hear one thing depending on whether it's a functional medicine specialist or a nutritionist or a kind of a western medicine thing and it's really confusing for people because you're 5 minutes per visit GP at the clinic down the road is likely to say the opposite of what you're saying.

TOM: That's exactly right. Their training on this is that many of them—not all of them—many of them have reluctantly embraced that “yeah there might be a problem, you might wanna cut down on it a little bit” or cut down on it a lot. But if you know the science, you can't be a little pregnant. You can't have a little gluten.

If you have an immune reaction to gluten, the mechanism by which the immune reaction works is just like a vaccine. You get a shot of a vaccination for measles, they give you the bug measles. Your brain says, “What's this? This is not good for me.” And in your immune system, you have generals—army, air force, marine corp generals—sitting around with nothing to do. And the brain says, “You general, you now are General Measles. Take care of this.”

General Measles builds an assembly line. The assembly line starts producing soldiers called antibodies. The antibodies are trained as assassins to go after just measles. They go all through the blood stream firing these chemical bullets called cytochians looking for measles. General measles is watching this. All the measles

bug from the vaccination is gone. General measles turns off the assembly line. You don't need these soldiers right now. You shouldn't have measles antibodies in your blood stream unless you are exposed. You shouldn't have them. But General Measles is vigilant the rest of his life. If you're ever exposed to measles again, General Measles just has to flip the switch and within a couple of days, all the antibodies are back. As opposed to having to build the assembly line that takes months to do.

That's why if you go to Africa to visit, you need shots months ahead of time for dengue fever and yellow fever and all of that. But if you go back 10 years later, you just need a booster shot 2 weeks before you go. You just have to wake it up again.

That general in the immune system is called a memory-B cell. Never goes away. If you have an immune reaction to gluten, you have memory-B cells to gluten. They never go away. So you can't have a little gluten. You can't be a little pregnant because your immune system turns on and then for months, 3-6 months, one minute exposure, a couple of chromosomes, one minute exposure and you've got antibodies for 3-6 months that are attacking your brain or your joints or your liver, wherever your genetic weak link is as to where gluten is going to mess you up.

DAVE: That's an incredibly picturesque view of it. There's another one. So many people, even some clients or bulletproof followers, they'll say "oh yeah I'm gluten free, at least 90% of the time"

TOM: Right.

DAVE: And I'm like ya know you remind me of your friend. She's a heroin addict. And she just using a little heroin, alright? Like, this is one of those things' that's pretty binary.

If you keep stimulating that part of your body, not only are you gonna get the negative immune inflammatory effects, you're gonna get the cravings right?

TOM: Yes.

DAVE: Like the addictive side of it. Okay so, how does the addictive side of gluten work versus the destructive inflammatory side of it work?

TOM: The problem with gluten is that no human can digest it. It's impossible to

digest the gluten proteins that are in wheat, barley and rye. [Alessio Fasano, Dr. Fasano](#) from Harvard Mass General Hospital, he's the director of pediatric gastroenterology. He is very clear about this in his presentations. No human can digest this.

The way he says this is if you take the hydrochloric acid in the human stomach and you put it in a little vial. You put your finger in the vial. It eats your finger to the bone in one minute. One minute! You put some gluten in that vial, it won't digest the gluten. He's got this Italian accent, it's very cute how he says it, but it doesn't digest the gluten. When you eat gluten, it is not digestible. It's supposed to be broken down into very small molecules called individual amino acids or 2 or 3 together a dipeptide or tripeptide and that gets absorbed very easily into the blood stream through the intestines but you can't break it down into dipeptides or tripeptides.

DAVE: There's no proteases? I mean hydrochloric acid won't do it but—

TOM: It won't do it.

DAVE: No human protein digestive enzyme made by the pancreas or the liver is capable of breaking down gluten. You're saying this is a definitive fact. Dr. Tom O'Bryan who spent 30 years doing this. Everyone listening to this?

TOM: That's exactly right. The closest enzyme is called DPP4 and it can break down partially but no enzyme produced in the human digestive tract can break this down. It's just the science! Just read the papers!

DAVE: So I'm just gonna poop it out anyway, who cares if I break it down?

TOM: Yeah, well here's the point.

DAVE: Yeah.

TOM: If you think of proteins, proteins are made up of 100s of amino acids and digestion—think of protein like a brick wall. Digestion is getting the mortar off the bricks.

Each individual brick is the amino acid and that gets absorbed into your blood stream. So you have to get the mortar off the bricks and take the brick off it goes into

the blood stream and then your body uses it to make muscle or whatever it's going to do with it. But with gluten you can't get the mortar off the bricks so it's like someone took a sledgehammer and broke the wall into a bunch of pieces. There's a 17 brick clump. A 33 brick clump. An 11 brick clump. One of those clumps that occurs in about, well, that the immune system reacts to in about 1/3 of the people that have an immune reaction to gluten, so it's a pretty high percentage of them is called gluteomorphins. It's a peptide of gluten of partially digested gluten. Gluteomorphins are called gluteomorphins because they bind to the opiate receptor sites in the brain like morphine.

If you have these gluteomorphins traveling in your bloodstream, these clumps of brick that's called gluteomorphins and they bind to the opiate receptors in the brain, what happens there? It stimulates the opiate receptor producing endorphins. The feel good hormones in life. It's great! You feel good! It's not a problem. But you have toast for breakfast. You stimulate those opiate receptors. You have a sandwich for lunch, you stimulate those receptors. Pasta for dinner every day, every day, every day, every day! And what happens is you down regulate the receptor which means it stops working.

That is exactly the mechanism in the development of the epidemic of type 2 diabetes because from birth we're eating so much sugar we down regulate the insulin receptor so insulin doesn't work anymore or it works less efficiently than it should. The same thing happens with the gluteomorphin peptides from harshly digested gluten when they hit on the opiate receptors you downgrade the opiate receptors in the brain. That's why it's associated with attention deficit and autism and depression and anxiety. Because people don't have the juice of life. They can't get the endorphins working or being received to feel good about life. And so they crave that food. That's--

DAVE: So if you eat wheat, even things like a runners high, which is another way of getting opiates, isn't gonna give you the same satisfaction?

TOM: Well it won't give you the same degree of satisfaction. You need to run harder or run a little longer to get that same end result feeling because your opiate receptors are being down regulated by the gluten! By the gluteomorphins.

DAVE: So if opiate receptors are part of what allows us to feel happiness and life satisfaction, eating gluten makes it harder to feel happiness and life satisfaction. I'm

just paraphrasing what you're saying there, but do you agree?

TOM: That is why depression is the number one cognitive complaint in celiac disease.

DAVE: This is kind of a side note but a huge amount of dog food, the protein they put in there is gluten and they have dogs on prozac. What do you think.

TOM: Ya think?

DAVE: I think there's a connection there, personally, but I noticed mood stability and this is also something that Dr. Davis talks about in wheat belly, but mood stability in myself. When I went off gluten, it was accidental. I was just trying to eat fewer carbs and so I didn't eat it and my personality changed over 3 months. It was a huge difference. Like, I wanted to kill a lot less people!

TOM: I'm so happy for you!

DAVE: It was a long time ago, granted. I've moved on.

TOM: It was at least 6 months ago, wasn't it? But you know, that's actually so very common that people say that they see the world differently. They just feel better aside from they sleep better, their energy's up. Their view of life changes and if they get some exposure to gluten, many of them crash. And they crash in that their outlook on life changes. They don't feel so good. They're grumpy. They may get a wave of depression.

DAVE: Isn't that kind of similar to what happens with a heroin addict?

TOM: Ya know, Dave? Right? It's a very similar mechanism because the opiate receptors are so engaged with a large percentage of people that have gluten sensitivity.

DAVE: When I was really experimenting with the early days of the Bulletproof Diet, I was like alright, I'm gonna do that cheat day. And I would have bread and crusty sourdough, the best bread ever and you can only eat it once right?

TOM: Oh yeah.

DAVE: And the next day I'd be like, ya know, I need to bring a vein up here so I can figure out—cause I craved. I convinced myself I'm gonna have just one piece of bread. It didn't hurt me yesterday it won't hurt me today. And pretty soon I was having bread every day and then I'd catch myself and I'd go off and I just realized that it is insidious.

TOM: Yes.

DAVE: what it does and you described the mechanism there. It's an opiate thing.

TOM: Yes. And the reason it's insidious is because you don't vomit. You don't feel it right away. It's a subtle behind the scenes dumbing down—it's like a dimmer switch. I call it the dumb down effect. You get dumbed down.

Here's a study on this—this was really an interesting study. In Finland they know that cardiovascular disease is the number 1 cause of death so they sent out letters to 5000 families “We'd like to follow your children for 30 years to see if we can identify mechanisms that make them vulnerable to developing cardiovascular disease and see if we can prevent it. Everything's free. Everything. Would you like to do it?”

After 20 years in this study, 2,456 now young adults were still on the study. Other research—oh and every year they drew their blood, they got their grades from school, “are you playing any sports, any social activities, any trouble with the law, are your parents healthy?” They got as much information as they could to try to see if there were any patterns for those who may eventually develop cardiovascular disease. Other researchers heard about this. And when they drew the blood, they freeze the blood. Other researchers heard about this and said, “Can we have some of the blood? We wanna check for silent celiac disease” now what's that? “ That's when people have celiac disease but they don't have gut symptoms so they don't know. It might be affecting their brain, it might be affecting their joints, maybe they have arthritis but they never associate it with wheat so they said, “Yeah sure you can have some of the blood.”

They found that in those 2,456 people there was just over 50 of them that had silent celiac meaning the blood test showed the immune system was very active, you've got a problem with this, but the person didn't know it. So they looked to see what happened to these 50 people over the course of the last 20 years? Where are they in life now? And this is what they found:

Those children diagnosed with celiac disease, 23% of them went onto a college or university degree. Those not diagnosed with celiac disease, 54%. It was more than double went onto a university or college degree. Those that had silent celiac disease, 21 or 22% were being promoted. They were in an administrative position. They're working hard, they're getting promoted in life. Those without? Over 48%. And the name of the study: [“Silent Celiac Disease: A Cause of Underachievement.”](#) And if you had said to these people, “hey I noticed that the 3 buddies you grew up with in high school went on to college but you didn't” and the guy says, “yeah yeah, I didn't do very well on my SATs but that's alright, I'm happy” and maybe he's a sales person or a tradesmen and he has a family and he's really happy in life? But what was his potential that he never got to tap? What because of this dimmer switch just dumbing down the brain with these antibodies going after the brain. What was the potential? And that's why I call it the dumb down switch.

DAVE: That was only 50 out of 2500 people.

TOM: That's right.

DAVE: Okay, so--

TOM: With silent celiac. Now understand that's celiac disease. That means they've got the blood test that shows they've got total billus atrophy, not gluten sensitivity.

DAVE: Okay.

TOM: Gluten sensitivity is one study shows 30 times more prevalent than celiac.

DAVE: So are gluten sensitive people going to have the same declines in performances with their dimmer switch hid?

TOM: Ya know, I always try to answer by the studies.

DAVE: Yeah.

TOM: So I'm gonna answer you two ways. First by the studies.

The studies on non-celiac gluten sensitivity just started coming out a few years ago.



It's finally been recognized. There's not enough information to conclusively say that. We do know that is that depression's associated with it. Fatigue, GI upset, rheumatoid, psoriasis, there are a number of diseases and conditions that are now associated with celiac or non celiac gluten sensitivity but I can't be as conclusive in the answer to you from a science perspective. Clinically we see it all the time. In our offices we see it all the time that when patients go off gluten without—and they didn't have celiac disease, their brains start functioning better. They feel more alive. It's like the lights turn on brighter again.

DAVE: I don't think it's possible to be in the Bulletproof state of high performance that I'm working to lead people towards if you're on gluten, or frankly if you're on regular opiate drugs either.

TOM: I fully agree.

DAVE: It's a really big statement though, but we're saying certainly if you have celiac, and likely if you have gluten sensitivity that you are not going to be capable of living the life that you are capable of if you keep dosing yourself with this stuff.

TOM: That is exactly right, Dave. There's a dimmer switch, the dumb down effect and the people don't know! These people didn't know that they were dumbed down through high school and didn't do well on their SATs. They didn't know!

DAVE: Alright. Now so what do we do about this? There's a company I've seen saying that if the wheat is an ancient species of wheat, then it's okay. Or you should have spelt or kamut or oats that contain glutenin and these other things like that. What's your take on the gluten-like compounds and other grains? Are these equally dangerous? Are they less dangerous? Should we just ditch the grains? It's kind of a big ask.

TOM: As you started to ask the question, I had to have a sip of my bulletproof coffee to calm down before I answer you.

DAVE: I'll get you a Bulletproof Coffee cup. We gotta get you the new one.

TOM: Oh good, thank you! So, gluten's not bad for you. Bad gluten is bad for you.

DAVE: Oh that's what they're saying, right?

TOM: So for all of your listeners, there's gluten in rice. There's gluten in corn. There's gluten in a number of grains. It's not gluten. It's the bad family of glutens that are bad for you. Now there's other reasons why some of those grains would not be great.

For example, rice flour has a higher glycemic index than wheat flour. So if you're eating pastries made with rice flour, it alters your blood sugar more aggressively than eating pastries made from wheat flour. Now this is not talking about the immune response, just blood sugar regulation. So the idea of eating other grains or other grain based packaged goods and products, I personally think we're meant to have a little grain once in a while, especially if you're a high performance athlete or you're just high performance. You need a little grain every once in a while. You just want the grains that aren't offending you and thus activating your immune system to fight it, and you want the grains in dosages that your body can metabolize well.

So the main emphasis of your diet is quality meats and quality vegetables, maybe a little bit of fruit once in a while and a little bit of quality grain.

DAVE: And what are the most quality least immune offensive grains?

TOM: Brown rice, quinoa, and amaranth in my experience are—and this is clinically, I haven't seen any studies that show level of immune sensitivity between those grains. I haven't seen any studies that show that ones are worse than the other. The only ones I've seen many studies on of course—wheat, rye, and barley, and oats, the jury is mixed.

For example. when oats grow out of the ground, there's no gluten in them. You buy oats off the shelf, there's gluten in them and it's cross contamination. The trucks that haul the oats from the fields to the manufacturing facility hauled wheat last week and they don't clean the trucks! Or the assembly line that the oats are going down had wheat on it and they don't clean the assembly lines. So the studies that have looked at commercial oats are shocking as to how much wheat gluten is actually in them. But there are companies that offer gluten free oats. So I recommend to our patients, if you want oats or a little oatmeal once in a while, make sure it's gluten free oats. Now Mrs. Patient, you can be sensitive to artichokes. You can be sensitive to oats. But oats are not in the category of toxic glutens. In general, they're not part of that toxic family of wheat, rye and barley.

It may be a separate immune response you're having, but if you're eating contaminated oats, then you have to fall back into the toxic family discussion of wheat rye and barley if the oats were contaminated, but if you have non contaminated oats, you may have a sensitivity to it, you just have to check. If you don't have an immune reaction to oats, you're okay.

DAVE: I see a lot of people, when they go fully Bulletproof and then they try oats that they almost universally get like, bloating and digestive issues from them compared to white rice. But it's interesting that the three that you talk about the most there are brown rice, not white rice, and I'm assuming whole grain quinoa and whole grain—what was the other one—amaranth?

TOM: Amaranth.

DAVE: So, what about all the fiber in the husk and the anti-nutrients in the husk that's irritating to those same villi that have been beaten down by gluten all the time? Like, why wouldn't you take off the irritating parts of these grains before consuming them?

TOM: That's a really good question, Dave. And there's an entire family of discussion about lectins and the offensive nature of lectins and grains, absolutely accurate and valid discussion. So in our practice, we use the biomarker. I always go for biomarkers to see how's this body functioning. So we use the biomarker, looking at the indicators for intestinal permeability. And within 3-6 months, that should be cleaned up. And if it's not cleaned up then we get more strict and say, "Ok Mrs. Patient, we're gonna do a grain free diet for a while and see if you're having elected sensitivity that's impacting on this." So I'll do it in stages. I try and make it as manageable for the person to begin with, and if we don't get the results, I'm certain they're feeling better, that's obvious. But we want the biomarkers to be back down to normal and there's no inflammation in the gut at all because that is the most dangerous phase of gluten sensitivity is when you don't have positive blood work, you don't have any celiac disease with villus atrophy, the shags wearing down and all you have is inflammation in your gut. That is the most dangerous phase with double the mortality of celiac disease if you just have the inflammation.

DAVE: Okay so you would tell someone don't eat any of those grains while you're healing the gut and when the gut's fully healed then you can have some of these

grains? Like the brown rice? Or no.

TOM: Well, it depends on the patient. With most patients, we try to make it as manageable for them as they can as long as they don't have inflammatory bowel disease, colitis or Chrons, we will allow them to do the non toxic gluten grains and if they feel good there's no symptoms, they're improving, everything's going well, in 6 months they feel great, "doc I'm back to normal" I said great, lets check the biomarkers now, let's see. If there's still inflammation, still indicators of intestinal permeability, then I'll pull all grains. And that's just a clinical decision on my part. There are some doctors who will pull all grains right away and that's an excellent approach that I have no argument with whatsoever. My concern is full compliance.

DAVE: Yeah. I see your point exactly now. So a lot of people just aren't gonna do it. I recommend pulling all grains except for white rice as the least offensive one, even less offensive than brown and recommend sweet potatoes over that. But my assumption is that people who are after the state of high performance, kind of people who are listening to this, they wanna know how to do it perfectly and maybe if they're gonna degrade from perfect.

Alright fine, eat the quinoa or whatever else. But in your case you're going after people who aren't necessarily Bulletproof. And if it's grandma, well grandma's gonna have to have some kind of toast, yeah of course amaranth toast is better than wheat toast. I see your point exactly.

TOM: That's exactly right. So the high performance athletes, the high performance bulletproof people, they'll do "Doc, just tell me what to do and I'll do it." And for them going grain free is perfect. And we really have to counsel them to do it well and to do it properly, and as long as they do, they feel great. They feel marvelous. But I'm after, I wanna change the direction our world's going in--

DAVE: Yeah

TOM: And the way I do that is by talking about gluten sensitivity and celiac disease so I want compliance from the masses.

DAVE: Yeah, you've gotta make something workable. And replacements for bread are a major issue. Here's a question that may throw a monkey wrench into the works. How much of this is coming from the way we treat our grains with yeast?

Because [saccharomyces cerevisiae](#) say, the brewers and bakers yeast has a whole bunch of effects on the gut. Has a whole bunch of effects on the brain. Separate from gluten.

Do you think the studies that we've done are adequately separating toast which is yeast plus grain, from just grain?

TOM: No. No. The studies are not adequate. There are studies on this and this is really the big picture perhaps another session here can dive into. Is the problem with gluten is not that it gives you sore tummies. The problem with gluten sensitivity is that it gives you vulnerability and acceleration in the development of autoimmune diseases.

DAVE: Yeah.

TOM: And it's the autoimmune diseases and if for example. If you're making antibodies to [saccharomyces cerevisiae](#) if you're making those aska antibodies elevated, you have a 100% likelihood of developing Crohns within three years and those studies are published!

DAVE: Wow.

TOM: It's called predictive antibodies.

DAVE: That's--

TOM: Yeah I know!

DAVE: That's huge! So you're telling people it's not just gluten! Gluten can cause Crohns but gluten plus yeast really can cause Crohns!

TOM: Yes.

DAVE: So what about beer?

TOM: Yeah. Ya think? Sorry man, sorry.

DAVE: That's why beer is at that end of the spectrum on the bulletproof diet. Alcohol infographic. Like, it sucks, but this is what science has shown us and this is

what you can feel if you do the experiments on your own body. Actively and religiously avoiding gluten instead of “I only ate it twice this week” which doesn't count! Like, you didn't do it!

TOM: Yeah. Exactly. Exactly. And it's a really long discussion about predictive autoimmunity and I'm sure we'll do it on another show. And for your listeners I recommend they read this article first. It's by Mapkins by UCLA. It was a cover story in [Scientific American in March of 2006 called “Predictors of Disease.”](#) And you go to [scientificamerican.com](#), it's five bucks to download that issue, you read that article and then you understand the underlying mechanisms of what take you down eventually started 10, 15, 20 years earlier. And you can identify those mechanisms now and address them. That's the whole world of predictive autoimmunity. That's the problem with gluten sensitivity.

DAVE: So Tom when we were doing the [40 Years of Zen](#) training, I think over dinner you told me about this and it just blew my mind. So I will have you back on this show to talk about that specifically because it's fascinating stuff! And the fact that you can tell many years before what's going to happen and you can change what you do to your environment and what you put in your body and turn off that thing. This in all of history has never been possible for humans, at least in my understanding.

TOM: That's exactly right. Exactly, right for your female listeners, so many of them have problems with their thyroid and yet they get thyroid blood tests and the blood tests are normal. But they have got cold hands and feet, their boyfriends say their feet are cold at night or their husbands say they have cold feet in bed, right? They can't lose weight even if they don't eat for a few days, their energy levels are low. All signs of a thyroid that's not quite working up to speed. If you have elevated antibodies to thyroid especially post partum which is very common, you have a 92% likelihood of developing Hashimoto's thyroid disease within 7 years. And these studies are published! We've got these studies now on most autoimmune diseases.

DAVE: I had Hashimoto's, it was also postpartum. I did have Hashimoto's.

TOM: Ya know Dave, that sex change operation really worked well.

DAVE: It actually went away though. It cured my Hashimoto's. I used the “c” word. Uh oh. Religious gluten avoidance. No gluten for years, like a not a drop. And also, in fact I know, that there's cross reactivity between species of toxic mold and gluten

and in my case I have religious avoidance of those two. And if you already have hashimoto's, reducing everything that pisses it off and lets it calm down seems like a good idea, but if you don't wanna get Hashimoto's, especially when you're pregnant—I'm thinking better baby book recommendations here but—maybe not eating gluten before and during pregnancy and during the period of nursing is a really strong recommendation?

TOM: Yeah. Yeah.

DAVE: What does that do to the baby if the mom eats gluten while making milk?

TOM: Yeah. Oh my goodness. There was a study that was just published three weeks ago that showed in Sweden they've got socialized medicine so they've got records on everybody and apparently at birth they take some of the fetal blood and they freeze it for all births. They've got it on file.

They went back and they looked at the fetal blood and they found that children with autism. Every child with autism had elevated IGG antibodies to gluten at birth. Now IGG are the antibodies that come from the mothers. The mother's way of telling the baby, "Okay here's some antibodies to cat, now we've got cats in the house. Don't worry, they're friendly, this is going to help you adjust to the cats" but when you have elevated antibodies, mom has elevated antibodies in this discussion to gluten one of the toxic proteins in gluten. Those elevated antibodies go through to the baby, the baby's born with an elevated immune response, every one of those children, they checked autistic children.

Every one of them had those elevated antibodies. We don't know.

DAVE: Wow.

TOM: We don't know if that caused it or if that was just associated with it, that was just an observation. It was just made a couple weeks ago.

DAVE: I believe there is likely some correlation between gluten and autism because anything that causes autoimmune neurological inflammation adds onto the stack of things that increase the likelihood of autism. When you get a big enough stack, you tip over into that autoimmunity and you get autism or Aspergers or even some of the ADD and ADHD symptoms. So yeah, if you're--

TOM: Let me give you another example.

DAVE: Go ahead.

TOM: If you have celiac disease, this study was on celiac disease. That's when the sensitivity to gluten causes an autoimmune destruction of the shags in the intestines. Shag carpeting to absorb your nutrients. The shags were down and you get berber. That's with celiac disease. For those with celiac disease, 73% of them have a lack of blood flow into their brain. It's called hypoperfusion. 73%. That's 3 out of 4.

DAVE: I read that too Tom, so I'm glad you're saying this.

TOM: And a year on the gluten free diet, only 7% still had hypoperfusion and probably it's because of cross reactivity, but 73%? That's the vast majority of people with this sensitivity to gluten have a lack of blood flow into their brain. Now what does that mean? Cross your legs for two hours. Don't uncross them, leave them crossed, stand up and run. Give your kid toast for breakfast. Send him to school to learn. If they have a gluten sensitivity.

The result is they don't have enough blood flow into the brain. The reason I talked about that is when they look at spec studies in autistic children, consistently, the group of autistic children that have the same pattern behavior, whether it's repetitive motion, all those children have hypoperfusion in the same area of the brain. If they have avoidance of social contacts. All of those children have hypoperfusion in a different area of the brain.

DAVE: Yeah.

TOM: But they have this lack of blood flow and if you have a gluten sensitivity 3 out of 4 people have that lack of blood flow into somewhere into their brain.

DAVE: The prefrontal cortex is an area where I had the most problem. When I was eating gluten I would try and concentrate, and I was unable to bring oxygen to the front of my brain. There was no metabolic activity there. And I had lots of spots too. And yeah at the time I would do this stemming thing which is really common in people with Aspergers or even some ADHD.

You're constantly counting and you're talking to someone and you're doing this, other people do this facial scrunching and all that. And yeah gluten plays a big role there and you could even train the brain to move blood around, but if you train yourself around the source cause of the problem versus removing the problem, it's not gonna work and you basically said 90% of this problem go gluten free and a year later they're fine?

TOM: 93%.

DAVE: Okay so there we go, it's a huge cure rate.

TOM: Yeah.

DAVE: Now how long does it take when you go gluten free, if you actually go gluten free, I mean eating no gluten of any source including any hidden sources at all religiously, how long will it take for you to feel something? And how long will it take to receive full benefits?

TOM: That's a really good question. And the answer is similar to if someone says I wanna run a 10 kilometer race in under 40 minutes. How long will it take before I can do that? Ya know? It depends on the individual, their history, and their body style and how much damage has been done already. But the rule of thumb for me has always been in my office it's always been 3 weeks. If you aren't noticeably better where you know you're on the right track within 3 weeks, something's wrong here. And most people notice within 3 or 4 days of being gluten free.

Just a few days they notice I'm sleeping a little better. Oh I'm not barking at my children the way I was before. Oh I've got a nicer outlook on life. Oh my joints aren't hurting the way they were. They just takes a few days usually, but a good trial period is 3-4 weeks of full immersion. Not dip your toe in the water and reduce. That's just nonsense. It doesn't work.

The immune system, you can't fool mother nature. You can't fool your immune system. There's a rule of thumb body language never lies and your body is talking to you. You just have to know how to ask the right question. And the questions you ask are to the immune system. "Immune system, is this a problem?" And how do you do that? By doing the right blood tests to see. If you have elevated antibodies your immune systems talking to you saying this is a problem for me.

DAVE: So, we talked a little while ago about the Swedish baby blood study where they saved the blood from newborns and looked at IGG. What's the deal with colostrum? Like what is colostrum? You've written something about it. How does colostrum tie into this whole thing?

TOM: IF there was only one piece of nutrition that people could do for whatever ails them, there is no greater nutrition that you could use than colostrum. If that was the only thing possible. Why do I say that? Because there's a whole world of study, Dave, that came out about 7 years ago.

I think it was at Harvard first, and then Stanford and a few others called enteric neural science. This is post doctoral study after you have your MD. After you have your PhD. Now you go back and you study enteric neuroscience. And what is that? It's how the gut affects the brain and the central nervous system. That the gut is so crucial to the vast majority of health concerns that we face today. Not just gut pain. Any health concern may and likely has a gut component to it.

So if we hold that as the overview, then okay how do I help my gut? First if the gut's inflamed you have to reduce the inflammation. How do you do that? Stop throwing gasoline on the fire. It's not rocket science. If your immune system says this is a problem, stop it! Don't cut it down, stop it. But then how do you put the fire out and how do you rebuild the tissue and how do you produce the right bacteria that are supposed to be there? There is no ingredient that comes anywhere near turning on as many genes in so many different ways as colostrum.

Colostrum is the first three days of mother's breast milk. When a baby is born and mother starts breastfeeding, it's not breast milk, it's colostrum. What does colostrum do? Colostrum turns the switch on in the immune system in the gut that says okay you're up and running now. Let's start to heal that permeability that's natural when you're in utero. Let's start to produce some of those good bacteria that are supposed to be here. Let's start making some enzymes and start carrying the messengers to ask for more enzymes because food's gonna start coming down pretty soon. Colostrum turns the switches on in your gut for so many different functions.

DAVE: Now is it okay to use cow colostrum then because obviously cows make a lot more milk than humans and kinda taking human colostrum is a little gross.

TOM: There is a, now this is not my world of expertise, but my friend [Dr. Andrew Keech](#) has devoted his life to this. And he tells us in his textbook "[Peptide Immunotherapy](#)" that there is no molecular difference between cows colostrum and human colostrum. The human digestive tract of an infant, a child or an adult can take colostrum. From a cow.

DAVE: So Tom, I don't know if we chatted about this much, but a 20% of my [Upgraded Whey Protein](#) is pure colostrum from grass fed cows on purpose.

TOM: 20 percent? 20 percent? Wow.

DAVE: Yeah. It's the highest percentage. The reason I recommend weigh is for glutathion production, not as a primary protein source and I wanted as much IGG as I could get in there.

TOM: Right.

DAVE: And that was the best source. I used to use bovine serum albumen and switch to this new colostrum for that same reason. So, it's one of those things where hearing the science behind is awesome and I'd love an intro to your friend. I'll get him on the podcast.

Because if you're trying to heal your gut and you're trying to make all this work, getting quality colostrum in your body seems like a really good idea and the only source that I've been able to find is dairy, and I even tried like, raw colostrum from a dairy and that was kinda gross but the process stuff seems to work pretty well, so I'm a fan. I'll put it that way.

TOM: That's marvelous and you bet I've got a great great source for you to carry more information to your audience, and to look at how colostrum works with the whey proteins and—a matter of fact I'd like to try your whey protein. If you send me one of these, send me your protein. I'd like to try it.

DAVE: I will. That's way cool. I didn't think that you were that big of a fan, I just knew that you'd written about it and it's an area of interest because of the gut health.

TOM: Oh wait till we talk about proline rich polypeptides in colostrum! Oh that's the

whole show in itself and what it does for the brain.

DAVE: I can't wait to have you back on. We're going to do some serious biohacking.

TOM: Yeah.

DAVE: Now we're running out to the end of our episode this time. Tell me more about the dates and the URL for the launch of your [Gluten Free Summit](#). I'm really excited to hear what the rest of the speakers have to say there. You are a serious authority in the field. I spent way more time with you in person because of the 40 years of zen than the average guest on the show, so like, I back what you say with 100%, like you know it. So--

TOM: Thank you.

DAVE: Tell people how they can find you, where they can get more info and how they can sign up for the summit. I recommend it highly for anyone who likes this podcast, hear what tom has to say and the people he's brought together.

TOM: Oh thank you Dave, thank you. Hanging around with people like you and some of our mutual friends over this last year has got me thinking outside my box. And I said ya know I wanna make a difference in the world and I just looked at how am I gonna do this, and it's obvious because my world is gluten sensitivity and celiac disease. I wanna move the discussion forward by 5 years so that by January 2014, the average listener has the level of knowledge, the level of expertise and understanding and big picture about when gluten sensitivity is a problem and how it may manifest as the average person will normally, 5 years from now. So I want to create the catalytic event that will move that body of knowledge forward very quickly.

So as a result of that, I went to the world's leaders. The experts. The researchers and the scientists in the world of gluten sensitivity and celiac disease. I went to London and to England and to Oxford. I went to Oxford to interview the godfather of celiac diagnosis [Michael Marsh](#). It was a great great interview. He tells us the same thing that any inflammation in the gut is just as serious as total celiac disease villus atrophy. You have to address it because people die. We got it from the godfather.

I interviewed Dr. Fasano at Harvard. [Loren Cordain](#), the godfather of Paleo. [Yehuda](#)

[Shoenfeld](#), the godfather of predictive autoimmunity from Tel Aviv University in Israel. I've got all of these great speakers and then I went after some of the world's best nutritionists who were out there carrying the message of gluten free forward. Like [Melinda Dennis from Harvard](#). [Liz Lipsky for The Institute for Functional Medicine](#). [Nora T. Gedgaudas who wrote *Primal Body, Primal Brain*](#). I think that was the name of it.

DAVE: Yeah. Good book.

TOM: Jackie Carr from Montreal. And because I'm in the field, I ask them the questions. I want the pearls so that the average listener has the pearls. What do I do with all of this? For example, this is a really good one for your celiac listeners. Jackie Carr in Montreal. So this was a discussion.

Jackie, you're a patient with celiac disease. "Yes?" And you're a sensitive patient meaning if you're exposed to any, it affects you. "Yes?" And you're a single woman. "Yes?" And you go to restaurants ever once in a while. "Yes?" So how do you feel safe going to restaurants and not getting contaminated foods? "Oh that's easy. As soon as I get to the restaurant, I ask for the manager or the owner and I say, 'Hi, I'm a very sensitive celiac to insure there's not a 911 incident in your restaurant'" and the guys eyes always pop.

DAVE: Yes.

TOM: Just right away and I started laughing and I said "Jackie that's marvelous. That's just marvelous." Everyone should do that and the restaurants will get more on stage with this and get their people trained. But we have these little pearls from any one of the speakers. I really went hard at that. I have Jeffrey Smith from the GMO guy talking about just interviewed Jeffrey last week.

DAVE: He's great. He's gonna come on the bulletproof show too.

TOM: Marvelous.

DAVE: Marvelous.

TOM: So I put this all together and it's free. It's free to everybody. It's gonna be online. The website is glutensummit.com. It'll be November 6. We'll open the site in

about a week, we'll be sending out notices to people like you and hopefully you can let your people know.

DAVE: So Tom, by the time this hits the air, this will be definitely available. Your site will be live. So it was glutenfreesummit.com?

TOM: Correct.

DAVE: Okay.

TOM: Correct. Thank you. So come listen to them. Listen to the ones you want. We'll send out information every day as in who's speaking today or tomorrow, what are some of the key points they're giving. So we'll have 25 interviews that will air over the course of 8 or 9 days.

DAVE: So this is gonna be huge. And if you're listening to this, you've heard me talk about gluten before but tom knows what he's doing and he went to the other guys who really know what they're doing. And of all the things you can do to be more bulletproof, eliminating gluten is one of the very top ones and you've heard this in different interviews where people say, "Okay, I'm lazy. What are the things to do?" Number one, you've gotta cut this outta your life. Because just having just a little bit around isn't gonna cut it, and you don't wanna be walking around with your dimmer switch turned on. It's just not worth it.

TOM: Right. Agree. Totally agree.

DAVE: Tom, glutenfreesummit.com will get shownotes up that include that link and include links to whatever the science magazine--

TOM: Scientific American.

DAVE: Okay we'll get links to that in the shownotes as well, everything else we talked about and most definitely links for your summit. Glutenfreesummit.com or check it out in the shownotes and we'll give you the link at bulletproofexec.com.

TOM: Great.

DAVE: Tom as always, it's a pleasure. Thank you so much for taking the time today.



Tom: David thank you. It's always a pleasure to be with you and to do some mind melt together. It's always great. Thank you very much for the opportunity.

Dave: Talk to you soon. Bye.

Tom: You bet.

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