



Wellness Mama Podcast Episode 31
How to Know if You Have Gluten Sensitivity
Interview with Dr. Tom O'Bryan

Show Notes: <http://wellnessmama.com/podcast/gluten-sensitivity/>

Gluten is a hot topic in the health world. There are those who staunchly believe that only those with celiac disease should avoid it, while others claim that even a small amount can be harmful.

In this episode, Dr. Tom O'Bryan sheds some light on this topic. Dr. O'Bryan is one of the leading experts on celiac disease and non-celiac gluten sensitivity as well as a functional medicine practitioner specializing in chronic illness. I'm on the road this week, so this interview is conducted by Olivia from Wellness-Media.com and is a playback (with permissions) of this interview from last year's Wellness Family Summit.

We Talk About:

- Is gluten really that bad or can people who don't have celiac disease safely eat it?
- Long term effects of gluten consumption
- What intestinal permeability is and how it relates to gluten sensitivity
- How gluten (and other foods) can enter the bloodstream and cause autoimmune problems
- How celiac disease (an autoimmune disease) relates to autoimmune problems

- How your intestines are like a carpet
- Why gluten sensitivity can lead to osteoporosis
- The difference between gluten sensitivity and celiac disease
- How non-celiac gluten sensitivity can affect your children
- What are FODMAPs and how to know if you have trouble with them
- The biggest flaw in most studies

Related Resources:

- [The Wellness Family Summit discount page](#)
- Article: [Gluten is Not a Food Group](#)
- Article: [How Grains are Killing You Slowly](#)
- Dr. Tom's website: [TheDr.com](#)

Olivia: So, Dr. Tom, thanks so much for taking the time to be here with us today. We're so happy to have you.

Dr. Tom: Thank you very much. It's a pleasure to be with you. Thank you.

Olivia: Good. You are just so knowledgeable about gluten sensitivity, which is a topic that I know many of our viewers are highly interested in. So let's jump right in.

Gluten sensitivity has definitely gotten more mainstream attention lately, but there is still a lot of skepticism and many articles talking about why it can be problematic to avoid gluten and why gluten isn't that bad. So would you mind talking about your research in this area? Is gluten something that we do need to worry about, or is it okay for most people who don't have celiac disease?

Dr. Tom: Okay, that's a good way to get right into it. One of the interviewees on The Gluten Summit was Dr. Alessio Fasano, the Chair of Pediatric Gastroenterology at Mass

General, Harvard. Dr. Fasano is the world's leader in looking at gluten and its effect on the gut and the development of something called pathogenic intestinal permeability; leaky gut is the slang term for it.

What Dr. Fasano tells us is that no human can digest gluten. No human.

I have to back up. Gluten is not bad for you; bad gluten is bad for you. There's gluten in rice and there's gluten in corn, there's gluten in quinoa; gluten is an umbrella term for families of proteins, and it's the toxic family of proteins in wheat, rye and barley, those glutens are not good for us as humans. The other glutens are fine.

So it's the wrong word to use really in gluten sensitivity. It's kind of like someone handing you a piece of paper and saying, would you please Xerox this? Well, Xerox is the name of a company, but it's morphed into an action verb because it's so commonly looked at. And that's true with the word gluten. Gluten's not bad; bad gluten is bad. So we have to differentiate that to begin with.

No human can digest the gluten family of proteins in wheat, rye and barley. None of us. We just don't have the tools to do it. But wheat has saved millions and millions and millions of lives. Millions. When there was a country in Africa that had a famine and they were starving, we shipped boat loads of wheat over there, and we saved millions of lives. You can't ignore that it has been a godsend to many.

But the long-term consequences are where the problem is. It doesn't make you sick and become fatal if you eat a slice of bread. That's nonsense to even think about. But over a lifetime, over many, many years, sometimes decades - sometimes in children it doesn't take long at all - it just depends on when you cross that threshold where your body can't handle this little poison anymore. When you can't handle it, now you start getting symptoms.

So when you eat a sandwich, you don't feel bad when you eat it. You feel kind of good. We all like grilled cheese sandwiches; we grew up on that kind of thing. It feels good; it's a comfort food. But long-term, every time we eat the gluten proteins of wheat, rye or barley, you get intestinal permeability. Every time. That's what the science says. You just have to read the studies. If you read the studies, then you know, wow, I didn't know that. Wow.

You don't feel it when you're starting to get intestinal permeability, so let me give an explanation of what intestinal permeability is, if I may?

Olivia: Absolutely.

Dr. Tom: Think of a doughnut. If you could stretch one doughnut out, really stretch it out and you could look down the hole of this long, stretched-out doughnut, that's your intestines. It's one big, long tube. It goes from the mouth to the other end. One big, long tube.

So when you eat food - when you swallow food, it's really not in your body yet, it's still in the tube which is outside of getting into the body, right? It's got to go through the walls of the doughnut to get into the bloodstream. Then the food is actually in your body, and it can travel to wherever it needs to go to help rebuild new brain cells or new muscle cells.

But we've got this tube. How do we absorb the food as we chew it and swallow it? How does it get into the bloodstream? The inside of the tube is lined with shag carpeting. This shag is where calcium is absorbed; this shag, Vitamin C; this shag, fish oils. All the shags absorb different nutrients.

Celiac disease is an autoimmune disease from a gluten sensitivity where your shags wear down, and if your shags wear down, you've got berber. And if you've got berber, you don't absorb calcium. That's why in the Archives of Internal Medicine, they published a paper that said every osteoporotic patient needs to be checked for celiac disease, as celiac disease could be the cause of their osteoporosis.

So I showed that study to our doctors in my conferences for them. I said, so docs, if the Archives of Internal Medicine say every osteoporotic patient needs to be checked, which one are you not going to check? And they looked like deer in the headlights because they never thought of this before.

But you may know this, Olivia, that the number three cause of death in women over 60 is the complications of a broken hip from osteoporosis. It's very, very common that women die from this. Within a year they die, because they throw a clot. Very common. So women take these drugs called Bisphosphonates for osteoporosis, but they don't work. But if you look at the studies on Bisphosphonates, the x-rays show there's more bone. Look doc, here's the study - the sales reps for the pharmaceutical industry say, here's the study. See, here's the before, and here's the after. When women take this drug, there's more bone on x-ray. But the bone is balsa wood, it's not oak. It breaks just as easily as women that don't take the medications. They get just as many fractures. That's why the drugs don't work, because if gluten sensitivity and celiac disease were part of the triggers causing the osteoporosis, then taking the drugs, they build more bone, but they're still not getting the calcium and they're not getting the Vitamin D and the Vitamin K to build strong bone, so they build this cheap bone called balsa wood, and they get more fractures. That's important, because it's the number three cause of death for your listeners in women over 60. That's why it's important.

So celiac disease is when the shags wear down. So is it a hullabaloo? We'll talk not about non-celiac gluten sensitivity in a couple of minutes, but first, to answer your question, is it important to look at this? It's critically important, because it's so very common.

Now, only one person out of eight will have symptoms in their gut if they have a gluten sensitivity. The vast majority of people do not have symptoms in their gut, they have symptoms somewhere else. It might be in their brain. Your children may have seizures, or they've got attention deficit. Or it might be in the muscles, and you've got what's called polymyositis. You just kind of hurt all over; all of your muscles hurt. Or in your joints, and you've got polyarthralgia; lots of your joints hurt. You wake up in the morning and you're all stiff and sore, and you have to get in the shower before you can loosen up. Or it can be much worse; it can be idiopathic juvenile onset rheumatoid arthritis. That's really nasty when these kids get arthritis so bad and they can't figure out a reason for it.

Sometimes it's because of a sensitivity to the foods that they're eating. It just depends on where the weak link is in your chain as to where the problem is going to manifest. It could be at one end, the middle, or the other end. It could be your heart, your brain, your liver; your kidneys. Wherever the genetic weak link is, when you eat gluten, if you have a gluten sensitivity, you're pulling on the chain. You don't feel when you're getting osteoporosis; you don't feel it. You don't feel when you've got elevated antibodies to your brain. You don't feel when you have elevated antibodies to your heart. But eventually, you get congestive heart failure, or you get inflammation of your heart, and you get irregular heartbeats. That's the only symptom you've got. There are research papers from Mayo Clinic that tell us sometimes irregular heartbeat, sometimes congestive heart failure, may be caused by a sensitivity to gluten, it just depends on where the weak link is in your chain as to where it's going to manifest.

Olivia: That is so fascinating. And thank you, too, for clarifying the difference between bad gluten and other sources that are often clumped under the gluten umbrella, because I think that that causes a lot of confusion sometimes. Reading different articles or listening to different speakers, I think sometimes we can get confused as to, okay, so is there a good gluten? What is the difference? So your clarification was so helpful there, Dr. Tom. Thanks.

Dr. Tom: Well, thank you.

Olivia: Something I wanted to ask you about - and you began to touch on it a little bit - is the difference between gluten sensitivity and celiac disease, because again, I think these are two things that are often kind of clumped together and then people end up getting confused as to if they're the same or if they're different, or what that means. So could you speak to that point a little bit? And also, tell us how a person can know if they have either of these problems.

Dr. Tom: Yes, of course. It's a really important topic, and it's made me so mad in this last nine months, all of the - I call it the hullabaloo, that's going on out there. Gluten sensitivity is a fad; science says gluten sensitivity is a fad. So I'm going to tell you what happened here, and then let your listeners be the judge.

I'm pulling up a slide presentation so I can give this to you very, very clearly, and I give you the exact correct numbers on this.

There was a paper published in September of 2013 - last year - in the medical journal, Gastroenterology. That's a very prestigious journal. The paper was entitled No Effects of Gluten in Patients With Self-Reported Non-Celiac Gluten Sensitivity After Dietary Reduction of Fermentable, Poorly Absorbed, Short-Chain Carbohydrates. Big, long title.

What these authors were trying to do was to say, hey, there's a lot of different components to wheat. There's the gluten family of proteins, there are the carbohydrates that are called FODMAPs - that's the fermentable, poorly absorbed, short-chain carbohydrates, there are the oils; wheat germ oil, there are the opiate stimulating gliadin proteins; there's a lot of different components to wheat - fats, carbohydrates, proteins - there's not just gluten the protein. And these authors wanted to see are there some people that have the stomach problems, the symptoms of bloating and gas, that are having a reaction to the carbohydrates, poorly absorbed carbohydrates of wheat?

So it was a good study they did. They didn't want to look at the gluten proteins, because there have been hundreds of studies on that.

So how did they do this? Well, when they looked at the people that they considered having in the study - there were about 250 people that they thought they might have in the study, so they screened all these people. 37% of these people had an immune reaction to the proteins of gluten; 37% of the 250 people that they were going to consider in the study. So that 37%, you're not in the study. So they didn't allow the people with a gluten sensitivity - non-celiac disease gluten sensitivity in the study. They said, you're not in the study. Then, all of the people that had the genes for celiac disease were not allowed in the study.

So that's what we call cherry-picking your group; that they're really trying to isolate a group that doesn't have any other problems with wheat to see do these people have a problem with the carbohydrates? That makes sense to do. It's a valid way of doing research.

Then they did their study, and what did they find? They found that 8% of this group that qualified by their criteria still had a reaction to the gluten proteins. 8% of them. But then in the others, they found absolutely that the fermentable, poorly absorbed

carbohydrates, the FODMAPs, they really are a problem. For that group of people, it's a problem. When you've got FODMAPs out of there, all their bloating and gas and their irritable bowel syndrome complaints went away. When you gave them the FODMAPs again, it came right back.

So clearly, for some people, FODMAPs are a problem. But 8% of that group still had a problem with gluten, and 37% of the entire group were not allowed in the study because they had a problem with gluten.

Now, the only confusion here is that the title of the study, they said, 'no effects of gluten in patients with self-reported non-celiac gluten sensitivity after getting rid of the FODMAPs'. They should not have said 'no effect of gluten', they should have said, 'minimal effects from gluten', because they were looking for FODMAPs, but in the FODMAP group, there were 8% of them that still had the sensitivity to gluten. I don't know why they said no effects.

So that's the study. Now, here's what happened. A blogger in England read the title of the study, No Effects of Gluten in Patients With Self-Reported Non-Celiac Gluten Sensitivity..., so he writes a blog that says, see, there's no effects of gluten for people that don't have celiac disease. That's nonsense. It's a fad. Well, a writer from the London Times saw his blog and then wrote an article in the London Times about it. Then it went to The Telegraph, another newspaper in England, then it went to the New York Times, then it went to the Wall Street Journal, then it went to Huffington Post, and then it went to Forbes magazine, and all these writers trying to be on the cutting-edge of research say, see, science says there's no such thing as non-celiac gluten sensitivity.

It's nonsense. None of these writers read the study. If they had read the study, they would have said, well, why did they say no effects, because 8% had it, but they took 37%

- all those people with the gluten sensitivity weren't allowed in the study. They would have been thinking for themselves.

So I refer to that kindly as sophomoric writing. But what makes me mad about it is that tens of thousands of people read that, and they're questioning now if they don't have celiac, do they have a problem or not? And those are the people that get osteoporosis; those are the kids with attention deficit.

You know, in the Journal of Attention Disorders, in 2006, they published a paper. They looked at 132 kids with attention deficit hyperactivity disorder, and they put them all on a gluten free diet. Every child, or their parents, reported within six months improvement in all 12 markers. The DSM IV, that's the technical classifications for attention deficit, all 12 markers improved in every child within six months. Doesn't pay attention to detail; interrupts frequently; can't sit still; blurts out answers, all 12 actions that qualify as attention deficit, every marker improved within six months on a gluten free diet on every one of them.

The authors, in the conclusion of their study said, we are convinced that every child with attention deficit should be tested for gluten sensitivity celiac disease, because it may be the cause of their attention deficit.

So now, I've given you two studies. I've given you osteoporosis and I've given you attention deficit hyperactivity, where the researchers themselves say every person with this condition just has to be checked properly. They just have to be checked. And it makes me mad when these bozo writers write this gobbledygook that says, science says there's no such thing. Because people like you, a young pretty woman, you may be married, I don't know, and you may have young kids, maybe they've got attention deficit, and you're trying to do the right thing. But you read this gobbledygook and think, oh, I guess it's not gluten, and you don't pursue it. You don't ask the question. I'm

not saying that everyone has it; I'm saying that everyone needs to be checked with these conditions because it's such a common cause of their problems.

Olivia: Absolutely. And I'm a former teacher, Dr. Tom, and so when you're talking about attention deficit, my heavens, yes, absolutely. I've often wondered with some of these kids who suffer from attention deficit, I've often wondered if their diets are just tweaked a little bit, what kind of results we would see and how much more freedom that would grant them, because it is so difficult for them as well. And when it's something as simple as let's try cutting the gluten out, I would think, why not give it a shot? Or why not get tested for gluten sensitivity like you're talking about? So I think that's fantastic advice, especially for you parents who are listening whose kids might be having these same issues. That is great advice to heed.

Dr. Tom: You know, thank you. Thank you. I wonder how to reach the younger generations, you know, the young women in their 20s and 30s that have kids now, and you're wanting to do the right thing.

I'm going to shock you a little bit here; some of you. This is just the science. Some of you don't know this, but as of eight years ago, children born in the United States today have a shorter projected lifespan than their parents. Your kids are going to die sooner, at an earlier age, than when you die. They're going to get sick earlier, they're going to get degenerative diseases earlier, and the quality of their life is going down earlier than when it happens to you. That's the statistics.

The World Health Organization rates the United States second from the bottom in overall healthcare; second from the bottom of all industrialized countries. Just read the literature.

Now, they don't tell you that in the newspapers in the U.S. You guys don't know this, because it would be acknowledging what we do doesn't work. But let's keep doing it anyway. There is no country in the world - no, I shouldn't say that; I don't know that. But I know in Europe, you can't have advertisements for heavy drugs on television, showing all these happy people bouncing around with some little voice in the background that says, caution needs to be advised because this may cause death. But everybody is happy in the background, and we look at the happy people and just bypass the message that they're required by law to say. We think it's okay to have these ads showing happy people. Oh, I guess I'll take my Viagra. They don't tell you that it shrinks your brain. It enlarges other parts, but it shrinks your brain.

Or that Ritalin and Adderall for kids with attention deficit shrinks their brains; permanent effects from taking these drugs. Why do they give speed to kids to calm them down? Adderall and Ritalin are speed. You're a school teacher. You've seen it where these kids were - and then they give them the drugs, and the kids can settle down. You've got 35 kids you're trying to teach, and this kid has got to settle down. He can't keep doing spitballs and hitting the girls and whatever they're doing. You've seen that. Why do they give the kids speed?

I'll tell you why they give them speed, and this will make perfect sense to you. Perhaps some of you had \$100 car in your earlier years, when you really couldn't afford much, so you bought a junker car just to get to school. I had \$1,300 cars or less. You never get a tune-up on a \$100 car. It costs more than the car, right? You never get a tune-up. But some of these cars need a tune-up so bad, they stall at a red light. You stop at a red light, and the car goes put, put, put, put, and it stalls. How do you stop a car from stalling at a red light? You put the clutch in and you give it a little gas, or you put it in neutral, and you give it a little gas. You're not trying to hot-rod, but you're revving the engine so it doesn't stall. When the light turns green, you drop it in drive and off you go. Your kids' brains are stalling at the red light. And so to stop them from stalling at the red light, you

give them speed. And then all of a sudden, they start to calm down a little bit, because now their brain is firing on all eight cylinders.

I'm a car guy, and so I talk about eight cylinders. If your brain has got eight cylinders, your kids' brains are running on five cylinders, and the diagnosis is attention deficit or it's seizures or it's headaches or migraines, the brain is not running right. It's not balanced. It's not running right. So how do we deal with that in this society today? We give them drugs. We give them speed, to try to get the brain running a little faster because it calms them down, because now they have a little more control and they've got a little more self-control. That's why you give these kids speed for attention deficit. But just go online and Google side effects of Ritalin or side effects of Adderall. Read the side effects. What we do, because we trust our pediatricians - who are trying to do the best job they can with the training they've received - we treat the pharmaceuticals like the voice in the background on television that tells you if you take this, you could have bleeding ulcers and you could die. We don't pay attention to it. We don't read the side effects, because we just want our kids to function better, and our doctors, who we trust, tell us, well, this is what you do.

Well, sometimes you have to use pharmaceuticals for a short period of time, but the Journal of Attention Disorders, that research team that spent a year on this project, wrote and said, every child with attention deficit just needs to be checked, because a food sensitivity is often the culprit. Get the food out of there, and they get better. They start firing on eight cylinders. Does that make sense to you?

Olivia: Oh, yes. That makes absolute sense.

Dr. Tom: Yeah. Your kids have a shorter projected lifespan than you do, and that's sobering.

Olivia: Yes, that's a terrifying statistic when you think of it that plainly. It's almost unbelievable. But then when you talk about the things that you're explaining to us today, then it makes perfect sense. But the good thing is that we can do something about it, right?

Dr. Tom: That's exactly right, and that's why I'm doing this today with you today, Olivia, because it's this kind of education that tens and hundreds of thousands need to hear. This message from me is 'just check'. I'm not saying that everyone has a gluten sensitivity, but I'm saying it's so very common, and only one out of eight get stomach problems. It will affect your brain or it affects your kidneys or your lungs. It killed my godmother of liver cancer; it was undiagnosed celiac disease. It killed my father with a heart attack; but it was undiagnosed celiac disease. When you read the studies, you understand the mechanisms of how this may occur for some people. Not everyone. I mean, I published a paper four years ago on reproductive disorders and celiac disease, and how frequently recurrent miscarriages are because of a sensitivity to gluten. Not every one, but many of them. You've just got to check to see, do you have the sensitivity?

Olivia: Absolutely. Now, I want to zero in, Dr. Tom, on gluten itself. We talked about the connection with gluten and ADD. I want to ask you what is really the problem with gluten? Can you talk to us about what it does to us physiologically, and especially how it affects the brain?

Dr. Tom: Yes. Think of proteins like a pearl necklace. Hydrochloric acid undoes the clasp on the back of the pearl necklace. Now, you have a string of pearls. Other enzymes - and this is the proteins that we eat, whether it's chicken or fish or from grains or beans - proteins are like a pearl necklace. Lots of amino acids, they're the pearls that make up a pearl necklace.

Our digestion is enzymes that we produce that act as scissors to cut off each pearl of the pearl necklace. And then each pearl goes through the shags of the shag carpeting. There's a cheesecloth covering the shags, so only certain sized molecules can get through. So the molecules have to be really small to get through the cheesecloth, right? Remember your grandmother when she's making gravy? She pours the gravy in the cheesecloth, and the clumps stay on one side and the liquid comes through the other side. Only certain sized molecules get through the cheesecloth. That's how our intestines are set up. They're beautiful. Now, intestinal permeability, the leaky gut, is when you get tears in the cheesecloth.

So you've got this pearl necklace, and the enzymes from our pancreas, from our stomach, from our gall bladder, from the intestines themselves, act as scissors to cut off each pearl. The problem with the proteins of gluten in wheat, rye and barley is that we don't have the scissors to cut this. Humans don't have the scissors to cut off each pearl of the pearl necklace the way we can for chicken or for beef or fish. We can cut those pearls - most of us can cut those pearls easily into each little pearl, each little amino acid, that gets absorbed through the shags - through the cheesecloth, through the shags, into the bloodstream, and then your body uses them to build new muscle cells or new brain cells or nerve hormones or to build whatever you need. You have to have protein.

So that's how we get it is the amino acids. But with the gluten proteins of wheat, rye and barley, you can't do it. No human can do it. Let me say that differently. No human can do it. Do you get it? No human can do this. And then at some point, it doesn't make everybody sick, but at some point, we cross a threshold. It's called loss of oral tolerance. Then you start getting symptoms from this. At some point.

And it varies; for some people, it's at the age of three, for some people, it's at the age of 33. For some people, it's at the age of 63. I mean, it can be anywhere when you cross that imaginary line, the straw that broke the camel's back, boom, now you start having a

problem. You've been eating this food for years. I didn't have a problem; I ate it for years. No, you did have a problem, you just didn't have symptoms yet, and it's been affecting your brain. Now, your cerebellum has shrunk and you can't walk. You're 64 years old and you can't walk up the stairs gracefully, you have to hold the rail because you lose your balance. That's because your brain has been being attacked for 30 years, but you couldn't feel it.

That's the kind of thing that happens, whether the weak link is your heart, if it's your ovaries, if it's the reproductive system, or if it's your brain. The most common area is the brain. 50% of children with drug-resistant epilepsy.

Olivia, do you have children?

Olivia: I do. I have a three-month old.

Dr. Tom: Okay, good. So, still young, beautiful. But if you have a young child that has seizures, it scares you. It scares the bejesus out of you. You go to the pediatrician, they see what's happening, and they may recommend something or they send you right to a pediatric neurologist. The neurologist gives you some medications to give to your children. You see it kind of drugs them up a little bit, but the seizures calm down. They're not as frequent, but they still get seizures. You go back to the neurologist a number of months later. You say it's better, but he's still getting seizures. Well, let's try this medication instead. Now, it's a stronger medication, and perhaps it's quieting the seizures, but you can tell your child is not as buoyant as the other kids at daycare or something. You see this, but not having seizures, which you're grateful for, and you just love your child and you do the best you can, right?

50% of children with drug-resistant epilepsy, meaning the drugs aren't working and they still get seizures, 50% of them go into complete remission on a gluten free diet. And

that's published in the Journal of Gastroenterology. It's not my research. It's just published in the medical literature. How come your pediatric neurologist doesn't know this? Because it's published in a gastroenterology journal, and neurologists don't read gastroenterology journals. They don't have time.

But that's the kind of, as you said, wow. That's the kind of 'wow' that you see when you start reading the 19,000 articles about gluten sensitivity and how it may affect your body. There's over 19,000 research teams that have worked on this on one subject, another subject, attention deficit, gallbladder problems, liver cancer, whatever their area of expertise is, they work on it for six months to a year, they write the paper, they submit the paper to the journal. It gets bounced back to change a couple of words or something, they rewrite it, they send it back, and it gets published. 19,000 teams have said, hey, this is a problem for some people. What do you need to just understand who should be checked for gluten? Anyone that has a health concern. If you don't have the vitality you should have, you feel you should have, if you don't have the spunk, if you have any symptoms that you're not happy completely with how the current protocols you are doing are addressing those symptoms, you just need to be checked properly for gluten. You just need to be checked. I'm not saying everyone's got a gluten sensitivity, but it's so common.

Clinically, we see between 4 and 6 out of 10 people that come into the practice with any complaints whatsoever, you do the right tests, and 4 to 6 of them out of 10 have a sensitivity to gluten. Get gluten out of their diet, and they start feeling better right away. And sometimes, it completely eliminates their symptoms. Sometimes. Sometimes it just helps, because there's been so much damage, there's more that you have to do. So the question now is how do you test for this, because I said this a couple times, if you test properly. So I have to give you a little background information about testing, because your doctors don't know this. They just don't know. You'll listen to this

interview a few times on Wellness Mama's website, you'll listen to it a couple of times so you can take the notes, so you have a sense of clarity when you talk about this.

To be checked for gluten sensitivity, what most everyone does is a test called transglutaminase, and that is a blood test that looks for the indicators of celiac disease.

Celiac disease is one of the complications of a wheat gluten sensitivity when your shags wear down. It's the most well-known of them all, so the blood test is transglutaminase.

The research papers say 97%, 98%, 99% of the people with celiac disease, the blood test comes back positive. So it's right on the money almost all the time. Great; good test.

When sales representatives from the laboratories go visit doctors, they show them the research paper and they highlight 97%, 99%, and the doctor is eating lunch while they're talking to this sales rep, and they say, oh, that's good. Okay, I'll do that test. And they do that test, and sometimes they find celiac disease.

Here's the problem. I wrote to many of these authors of the research papers showing the accuracy of the transglutaminase test. Dear Doctor, when you chose your group to study for transglutaminase effectiveness in identifying celiac disease, did you include all stages of gluten sensitivity that cause celiac disease? Because your shags aren't normal, and then all of a sudden, one day they're gone. Your shags wear down slowly, right? It's called partial villous atrophy, or increased inflammation, called IEL count, that's up beforehand. Every one of those authors wrote back and said, no, celiac disease is total villous atrophy; the shags are worn down completely.

So if you're a researcher and you want to check transglutaminase, you need the blood of 100 celiac patients. Where are you going to get the blood of 100 celiac patients? There are blood banks that have blood for diabetics and blood of MS patients and blood of celiac patients, and you buy the blood from a blood bank. It's certified; yes, this is the blood of celiac patients. Or, you go to the hospital, and you look for people diagnosed with celiac disease. Well, the diagnosis of celiac disease is when your shags are worn down completely. That's the diagnosis criteria. So everyone whose blood they checked to

see if transglutaminase was an accurate test, their shags are worn down completely. And it's a very accurate test if you are at the end stage, and your shags are worn down completely.

If your shags are just partially worn down, called partial villous atrophy, or if they haven't started wearing down yet, but you've got the fire, the inflammation going on called increased IELs, if you're at that stage, the accuracy of the transglutaminase test, depending on which research paper you read, because other authors have looked at this, is between 27% to 33%, meaning it comes back with a false negative saying there's no problem 7 out of 10 times. The person is told they don't have a problem with wheat, when they really do. They just don't have the end stage yet.

To give you an analogy for this, most of us have had a loved one, a family member, or a neighbor that's had a heart attack. And they survive, and they come home from the hospital and they say, oh, my doctor told me I had a heart attack previously. I never knew. Have you ever heard that before?

Olivia: Yes, I have.

Dr. Tom: Yeah. How do they know that? Well, the cardiologist did a scan of the heart and they could tell that there was damage in the heart from a previous heart attack. That's how they knew.

So what if our cardiologist - they do blood tests for cholesterol to see if you have a risk of heart disease - what if they found that you had sky-high cholesterol levels, but when they checked your heart, there was no evidence of any previous heart attacks, and they said, oh, don't worry about it. There's no problem here. You only have a problem with cholesterol. It's fine. See? Your heart is fine. I mean, it sounds ridiculous, but that's the way it is now with gluten sensitivity and celiac disease.

So many of our gastroenterologists, they do the endoscopy, a very good test to look to see are the shags worn down, and if the shags are not worn down, they say, no, you're fine. Your shags aren't worn down. It's okay. Oh, your immune system says you have a problem with wheat? Oh, that's nonsense. It's okay. See, your shags aren't worn down. You're okay. That's the logic they're using. It's archaic.

So we need to be educated as to what the more sensitive tests are, because they're available now. They've been available for four years. There's lots of explanation for this on my website. My website is theDr.com, and you can go there and read about these tests. The laboratory is Cyrex Labs, Cyrexlabs.com. I have no financial interest in this. I should; I really should, but I don't have any financial interest in this company at all. I used to, but I withdrew almost two years ago so I could just talk to you about this and feel really ethically good that I'm not making anything on the side from this. You want your doctor to order the Cyrex test.

So here's the next part. The first part was the transglutaminase, and that's only positive consistently - I mean, if it comes back positive, you've got a problem. But if it comes back negative, it doesn't mean you don't have a problem. It means you don't have your shags worn down completely. That's good, but you may have partial villous atrophy. So the other test that you look for is an immune reaction to wheat. So when you take this necklace off, the gluten proteins of wheat, we can't cut it into amino acids. Our enzymes can only cut it into chunks; a 33 pearl chunk, a 17 pearl chunk, an 11 pearl chunk, of amino acids. We can't cut it down into each individual amino acid. Humans just can't do that. So now, you've got these chunks of amino acids which are very inflammatory in the intestines. They cause lots of inflammation and they tear the cheesecloth, and you get intestinal permeability.

Every lab in the country looks at one chunk of pearl necklace. They look at a 33 pearl chunk called alpha gliadin. It's a really good test to do, because if it comes back positive,

you've got a problem with wheat. But only 50% of the people come back positive who have celiac disease to yes, you have a problem with wheat. Well, that doesn't make any sense, because celiac disease is a problem with wheat. But when we look specifically for the problem with wheat, it only shows up in 50% of the people. Why? Because the lab is only looking at one chunk, and there are many chunks. There's over 60 different chunks of the pearl necklace that may develop in people because we can't digest this well.

So Cyrex Labs came out with a test that looks at the top 10 chunks of pearl necklace. Are you having a problem with the 33? It looks at the 33. Are you having a problem with the 17? Are you having a problem with the 11? Are you having a problem with the 18? It looks at many different chunks of the pearl necklace so that you get a much more comprehensive test. It rarely comes back with a false negative. Rarely. It can happen, no test is perfect, but it's much more sensitive to identify if you have a problem with wheat with or without celiac disease. It looks at transglutaminase also to see, but celiac disease is just one manifestation of how a gluten related disorder may occur.

Non-celiac gluten sensitivity - that all the hullabaloo was about from this blogger, I have to say blogger, not bozo, in England - it's affected tens of thousands of people.

Non-celiac gluten sensitivity is much, much more common than celiac disease; 6 times more common, 10 times more common, maybe as much as 20 times more common than celiac disease. We don't know, because no one has really looked that thoroughly yet, but it's very common. So you just need to check, and you check thoroughly with the test that I just talked about.

Olivia: Excellent. That's great information. Parents, we encourage you to re-watch this section again, like Dr. Tom suggested, before you go chat with your pediatrician about it, because he just offered a very clear explanation that can help you understand the best way to go about testing your own children for sensitivity.

Now, Dr. Tom, I want to ask you about the gut now. We covered the brain, and now I want to ask you about the gut. Does gluten affect the gut even in a non-celiac person, and specifically, what about kids? Can they handle gluten more and better than adults can?

Dr. Tom: Good questions. There was one thing about brain that I forgot to answer. I'd like to do that, and then I'll come to your gut question.

There are 14 different mechanisms that I'm aware of by which gluten may affect the brain, but I'll tell you the most common one, because it makes a whole lot of sense. They published this study where they looked at 15 patients recently diagnosed with celiac disease; their shags were all worn down, and recently diagnosed meant that they were still eating wheat; 15 celiacs who had been on a gluten free diet for a year; and then 24 controls. So they looked at these 54 people, and they did SPECT studies on all of them. A SPECT scan looks at blood flow into your brain. Blood flows into your brain two ways. You've got the garden hoses coming up your neck called the carotid arteries. And I do this not because I'm half-Italian, but so that you can visualize these blood vessels coming up here, right? The carotid arteries. At the top of the blood vessel, it's like a lawn sprinkler in terms of the blood getting into the brain. And people in the Midwest know this - I grew up in the Midwest - that in the hot summer, you don't water your lawn for five minutes every day. Rather, you soak the lawn for 30 minutes to an hour once or twice a week, because the waters has got to get down to the roots. The blades of grass don't absorb water, you have to get enough water to soak down into the roots to keep your grass looking good. That's how the brain is. You have to soak the brain. You've got to get lots of blood up there to soak all the areas. And that's what a SPECT scan does. It looks at blood flow into the brain. That's why we had Dr. Daniel Amen on The Gluten Summit, because he is the godfather of SPECT scans, and he talked about how gluten sensitivity affects the brain in kids and also in adults on The Gluten Summit.

So they looked at this and they looked at all 12 areas of the brain. And what did they find? For the healthy controls, the 24 people that didn't have a problem with celiac disease, none of them had a problem with blood flow into the brain. For those that had been recently diagnosed, 73% of them, 3 out of 4, had a lack of blood flow into - the average was one-third of their brain. Not enough blood getting in there. For those who had been on a gluten free diet for a year, only one had a lack of blood flow into their brain.

So what does it mean to have a lack of blood flow into your brain? So, a really good example for these young moms out there, and I know that's a large percentage of the audience that you address at Wellness Mama, which is so cool, and such a privilege to be able to talk to you people now. What does it mean if you have a lack of blood flow into your brain? Cross your legs for two hours. Stand up and run. Boom! Down you go, right? Give your child toast or french toast or pancakes for breakfast if they have a gluten sensitivity. Send them to school to learn. There's not enough blood in the brain. They get diagnosed with attention deficit because they're not firing on all eight cylinders. Does that make sense to you?

Olivia: Yes, it makes total sense.

Dr. Tom: That's how simple it is sometimes. You just have to check. And so, that's the common mechanism of brain. It always affected the prefrontal lobes, which is where depression and anxiety originate from. In some people, it affected the occipital lobes, and that's where seizures come from. Just go to PubMed or to Google, and type in celiac disease and seizures, and boom, here come the studies. And you see it; you see reversal of seizures, as I said earlier, drug resistant epilepsy, reversal of seizures on a gluten free diet for some people. That's one of the most common mechanisms by which a gluten free diet works for the brain.

Now, let's go to the gut. Does it affect the gut? Yes, it does. When you eat gluten, this protein that's toxic to humans - and I did say already it's saved millions of lives, so we want to acknowledge that - but in our industrialized world, we don't need to eat that. We've got plenty of other options. When we eat gluten, it changes the good bacteria in the gut. It alters the good bacteria and encourages more of the bad bacteria to live and prosper in the gut.

The result of that - now, there's a whole new world of science that opened up in 2007 that were the first courses; they were at the post-doctorate level, and that means after your MD, after your Ph.D., now you're at the post-doctorate level and you study, and this was at Harvard - and it was called Enteric Neuroscience. That means how the gut affects the brain. Now, here we are seven years later, and it's an entire field of discipline now. It's a sub-specialty, Enteric Neuroscience.

I have a new friend who's is a Ph.D. in Enteric Neuroscience, and that's her area of expertise is the bacteria of the gut and when it's off, how it affects the brain. We now know it's a contributing factor in the beginning stages of Parkinson's. In the beginning stages of Alzheimer's, it's the bacteria in the gut that's out of balance.

When you eat wheat, you alter the bacteria count in the gut. You lose many of the good guys and you get too many of the bad guys there, and you change the whole dynamic, which may affect anywhere in your body because the bacteria in the gut - you may have heard this before, we have 10 times more cells of good bacteria in the gut than all the cells in the human body put together. 10 times more cells than all the heart cells, muscle cells, bones cells, brain cells. Add them all up, you've got 10 times more cells of bacteria in the gut. And that bacteria has 100 times more genes than the human genome. The human genome has about 29,000 genes. The bacteria in the gut has 100 times more genes.

Genes control function. Genes turn proteins on; genes turn proteins off. Genes control function. So the question is, are we humans with a whole lot of bacteria, or are we bacteria having a human experience? Who's controlling who? And after about the second glass of wine with my friends, we start talking about this, and it's a very interesting conversation. Who's controlling who?

But that's a primary way that gluten affects the gut. It also of course can cause diarrhea, it can cause constipation, bloating, gas, all of the GI symptoms that one normally would think of with a food that you have a problem with. But only one out of eight have gut symptoms, whereas seven out of eight have symptoms somewhere else.

Olivia: Okay, that makes sense. Now, what about kids? Are children able to handle gluten more than adults...

Dr. Tom: No.

Olivia: ...or is it kind of a level playing field?

Dr. Tom: No. It's a level playing field. Children don't have the enzymes any more than adults do. No human, children or adults. Children don't complain as much as adults do. Children just take it for granted that they get headaches. That's part of life if they've had them their whole life. It's amazing when you meet someone when they're 17 and they realize these headaches they have are not normal, and it's the first time they realize that. They've had them as long as they can remember, and maybe mom gave them a baby aspirin once in a while or something, maybe not.

Olivia: Excellent. I want to shift gears just a little bit and talk about autoimmune disease. Does gluten play a role in autoimmune disease? Can you speak to that point a little bit?

Dr. Tom: Yes, that's really a good question. That's where the rubber meets the road; where the pedal hits the metal, and where the Twinkies hit the garbage can. What are autoimmune diseases? It's when your immune system attacks your own body. If it attacks the myelin around your nerves, it's called MS. If it attacks your liver, it can be hepatitis. If it attacks your joints, it can be rheumatoid arthritis. If it attacks your skin, psoriasis - there are many other skin autoimmune diseases, but these are the ones that we're most familiar with.

Every one of them is looked at separately and differently. You go to a dermatologist for psoriasis, you go to a neurologist for MS, you go to a rheumatologist for rheumatoid, and they all have their little silos of specialty, and they think about the skin, they think about the nerves, they think about the joints. That's all they think about. But when you get a global picture and you look at them, the mechanism is very similar for all autoimmune diseases.

Autoimmune diseases are the number three cause of getting sick or dying in the world today - in the industrialized world - number three behind heart disease and cancer. So it's very, very important that we know about this. Parkinson's is an autoimmune disease, Alzheimer's is an autoimmune disease, dementias are often autoimmune, diabetes, of course we know so much about; heart disease can be autoimmune, so it's not some peripheral thing that someone you met a year ago has an autoimmune condition.

The National Institute of Health tells us that there are 24 million people currently diagnosed with autoimmune diseases. 22 million have cardiovascular disease diagnosis, 9 million have cancer, but 24 million have autoimmune. It's the most prevalent one. But we know only one out of three people with an autoimmune disease are diagnosed. So that gives us about 72 million people that have the outright disease. Like, the shags worn down completely, they've got the celiac disease, not just the mechanism causing it, but they've got the disease. 72 million people.

And we know that there's a trilogy in the development of autoimmune diseases, whether it's Hashimoto's thyroid disease, or MS or whatever it is, there's a trilogy. First, you have to have the genetic vulnerability to that disease. Second, you have to have an environmental trigger that sets it off; the straw that broke the camel's back. And third, you have to have intestinal permeability, the leaky gut. Those are the mechanisms. And what the science says, when you read the science, just read the papers - and I'm talking to doctors now because the general public doesn't read these papers; you can if you want, they're on my website, many of them - their language is you can arrest the development of autoimmune disease. The number one most prevalent condition that's going to take us down, you can arrest the development of autoimmune disease by healing the gut. That's their language. Heal the gut.

Now, why is gluten so important? Because gluten is the most prevalent environmental trigger. Remember number two of the trilogy, that an environmental trigger sets it off? Gluten is the most prevalent environmental trigger that we're exposed to because we eat it. Toast for breakfast, sandwich for lunch, pasta for dinner, croutons on your salad, a cupcake or a cookie, a bagel for breakfast, a cupcake every once in a while at Starbucks, pasta for dinner. We eat it multiple times a day every day. That is the most common environmental trigger we're exposed to.

So my whole passion, the reason for all of this work, is to arrest the development of autoimmune disease, the number one most common trigger for us getting sick and dying early in life. And that's your kids. That's you and your kids. These mechanisms are going on.

Cyrex Labs - and maybe we'll do a whole other session on this at some point -but Cyrex Labs has another test, Array 5 - the gluten peptide test is Array 3-Array 5 looks at 24 different tissue antibodies. There are 6 for your brain, there are 3 for your heart, there's your joints, your lungs, your reproductive system. It looks to see do you currently have

elevated antibodies in your body that's attacking your tissue wherever your weak link is? Because you don't feel this until it's really bad, until your body can't compensate anymore. Now, you start getting symptoms. Nobody gets autoimmune diseases overnight. They're decades long. So the antibodies are there for years often.

That was the purpose of The Gluten Summit. And if you listen to - I think everyone should listen to The Gluten Summit. I really do, because if you listen to The Gluten Summit - you can listen to it when you're cooking dinner, you listen to it when you're driving alone in the car, it will take you a month or two months to listen to this, because there's 29 interviews. They're all the world leaders.

You've got Yehuda Shoenfeld from Tel Aviv, Israel, the godfather of predictive autoimmunity. What does that mean, predictive autoimmunity? We now know that if you have elevated antibodies to your thyroid, especially after a pregnancy, postpartum, if you have elevated antibodies to your thyroid, there's a 92% likelihood you're going to have Hashimoto's thyroid disease within seven years. We know that. But you have no symptoms after the birth of your child. But here's the science. Just read it.

If you have ASCA antibodies, you're going to get Crohn's within three years. If you have myelin antibodies - we know about all of these diseases, the positive predictive value, because there have been hundreds of papers now published on it. The researchers are telling us the science is there, but the doctors don't know this. But that's the purpose of Array 5. That's the purpose of Cyrex. That's the purpose of theDr.com. That's why I'm out here doing this. When you get identified for the autoimmune mechanism that's going on inside of you right now, it's a wake-up call. It's like whoa, really?

I mean, I did this test on myself nine years ago when it was still in research stage. I had three antibodies elevated to my brain. I had myelin basic protein, that's MS; I had cerebellar peptides, that's shrinking of your brain so that you can't control your muscles

when you're an elder; and I had ganglioside antibodies, that's numbness and tingling in your arms, your legs, your cheek. I called the lab and said, what is this? This is a mistake. I'm a triathlete. I was really healthy. I was eating well. No, it's not. I said, do it again. We did. We know it's you. We did it again. It's accurate, sorry.

And that was a wake-up call for me that living my healthy life that I was living wasn't cutting it. It wasn't cutting it. Here's the evidence. I'm going to get MS if this continues. If this continues for seven years, I'll start having symptoms of MS. I read the science and I went, whoa. It's sobering. You can't hide from that. You can ignore it if you want to, the way that we all ignore it when we see those pharmaceutical ads on television that tells us this is going to kill you, but everybody's happy in the background so we focus on the happy, right?

So you can ignore this, but so many more people that want to be healthy, or you want your children healthier, you do Array 5 from Cyrex, and it's a wake-up call. I mean, whoa. My gosh. Okay, what do I do? Then you learn what to do. That was the purpose of The Gluten Summit is to get this global overview, and then how do you heal the gut, how do you live a gluten free lifestyle, how do you live a dairy free lifestyle? You have these experts. I had seven nutritionists on, world-class nutritionists.

I'll give you an example. Jackie Carr from Montreal. Jackie, you're a celiac, aren't you? Well, yes I am. And you're a single woman? Well, yes. Do you go to restaurants? Oh, yes, all the time. How do you feel safe eating out if you're a celiac? Well, actually, I'm a very sensitive celiac, Dr. O'Bryan, so I have to be very careful. How do you do this? Oh, it's very easy. When I walk into the restaurant, I ask for the owner of the restaurant. Not the manager, the owner. And they say, oh, the owner is not here. So I say, all right, well then I'll speak with the manager. And when the manager comes, I say, hi, my name is Jackie Carr, I'm a clinical nutritionist, and I asked for the owner, but I'm told that that person is not here. Yes, I'm the manager, how can I help you? Well, I have celiac disease. Oh, I

see. And so to avoid a 911 incident in your restaurant, will you personally make sure that everything that's served to us is gluten free? Oh, absolutely. And they just panic, because you say 911, and they see ambulances and sirens and gurneys coming into their restaurant, and they make sure.

And I just laughed and laughed. I said, Jackie, that's beautiful, because if they get 10 people a month coming in and saying that to them, they're going to change their protocols, and they're going to be proud to say, we are a gluten free facility, right? So it's pearls like that. How do you send your kids to school for lunch? Deanna Minich talked about how do you prepare lunches that are gluten free that everyone loves?

So I gave you the science, and I interpreted the science, because as I said before, Professor, I may interrupt you during the interview. Why is that? Well, because you may say a word that you and I understand, but a housewife at home who's listening may not understand it, and she's going to start thinking about dinner and what she's cooking for dinner. Oh, oh, of course. And I interrupted them frequently, and I'd say, excuse me, excuse me, Professor, I'm sorry, but did you just say? Yes. And does that mean? Yes. And wouldn't that mean? Well, yes, that's correct. Do you hear that people? What we have here is the world's leader of predictive autoimmunity telling you that, that, that, that.

So I did that with all of the interviews. That's why we had 118,000 people that attended. And that's why it was a game changer in the world of health summits and getting information out to people. It is so valuable to listen to this, because you people, if you don't want your child to be one of the statistics where they die at earlier age than when you die, if you don't want that for your child, you need to get this global picture. And you aren't going to get that from your pediatrician; you aren't going to get that from any doctor. You need to get educated with things like Wellness Mama and these interviews. You need to listen to the world experts when they're asked the questions that they

specialize in so you get a big picture overview. And then you do an OMG. You do an OMG, and then you talk to your spouse and say, no, you need to listen to this, because we're making some changes. We're going to check to see, and then we're making changes. That's why I did The Gluten Summit, that's why the Dr.com exists, and that's why Cyrex Labs exists.

Olivia: That's excellent. So we definitely encourage our viewers to check out The Gluten Summit. Now, Dr., for the short amount of time that we have left, let me ask you in terms of practicality. If someone does have celiac disease or gluten sensitivity, is a gluten free diet enough? And what about those people who don't completely improve on a gluten free diet? Are there other considerations?

Dr. Tom: You did your homework. No, a gluten free diet is not enough, but it's a prerequisite. You must do that first, but it's not enough. Children diagnosed with celiac disease have a threefold increased risk of long-term mortality with or without a gluten free diet. That means five years out and more, they're going to die early compared to kids the same age that don't have celiac disease, with or without a gluten free diet. Elders diagnosed after the age of 60 with celiac disease have a fourfold increased risk of death in the first year after diagnosis. It's mind-boggling, and every doctor ignores this. All of our experts ignore this, except me. And I'm saying you can't ignore this. And why? Because it's the bonfire that's going on.

It takes 976,000 mouse traps to fill up a football field laid side-by-side - I know the guy that figured this out - big football field, you know, a mousetrap is a couple inches wide, four inches long. So he did the math, and he got the measurements of a football field and how many does it take? 976,000. Cock each mouse trap, put a ping pong ball on each mouse trap. Now you have 976,000 mouse traps with ping pong balls on them. So if you look at this football field, it's white. All you see is ping pong balls, right? It's white out there. Walk along the sidelines with one ping pong ball. Throw that ping pong ball

out onto the football field. It hits one mouse trap. Pop. Now, there's two ping pong balls in the air; the one you threw out there and the one in the mouse trap that just popped. They hit two mouse traps. Pop. Pop. Now, there's four ping pong ball in the air. Pop. Pop. Pop. Pop. Now there's eight. Pop. Pop. Pop. Pop. Pop. Sixteen. And you have what's called a cascade reaction, and this thing has a life of its own. And the initial irritant, the gluten, that you used to eat, it's all gone. You're not throwing ping pong balls out there anymore. But pop, pop, pop, pop, pop has a life of its own.

For the docs out there, that's oxidative stress, and that's what happens when you have a food sensitivity that you've been eating for a long period of time, you stop the food, but most people, only 33%, 36%, depending on the study, of celiacs heal on a gluten free diet. The rest of them don't heal. That's why the mortality is still so high for them with or without a gluten free diet. Their quality of their life is better, their symptoms reduce, but they still have shorter life spans. And that's why is because the inflammation is still going on.

And that's a whole other hour to talk about. Actually, it's a weekend course. But the message is first, you find out if you have the problem. You get on the gluten free lifestyle. You listen to The Gluten Summit. You listen to all these experts talking about their piece of the pie. So, you spend an hour while you're cooking dinner. It may take you two days, and you listen to this one nutritionist talk, and you get one point out of it that changes how you do things for the rest of your life. Is that worthwhile for how you work with your kids? Absolutely. So it's like \$3 per world expert, something like that, to listen to these things, and you get all this information, and then you start applying these principles a little bit at a time.

There's no magic pill. You can't give your kid Adderall or Ritalin and expect them to be normal, vibrant, creative minds that really are tapped by the universe and really want to expand and make the world a better place. No, they're drugged out. They're drugged out

and they're suppressed because they're drugged out. It's like driving your car with the emergency brake half on. You want your children to function and so you do the best you can, trusting your pediatrician, but I've got to tell you, wake up. We have the second worst healthcare system in the world, according to World Health Organization. Ranked second from the bottom. Wake up. What we're doing to our kids is horrendous. The obesity epidemic is horrendous. And what's the one system of the body - if you're only going to do one system to help them function better than any other system? It's the gut. It's the gut. You heal the gut. Enteric Neuroscience is where so much of the research is going. So what's the first thing with the gut? Stop throwing gasoline on the fire. If you're sensitive to gluten, stop eating gluten. And I've got to say, you think? I mean, really? You question this? Just read the studies.

Don't tell me you want to be healthy if you don't take a little time to look into this. Just look at the studies. I'm not recommending my ideas. I'm recommending you look at how I pulled the studies together so you could see it. Read the information. Listen to the experts. Make the decisions for yourself. Wise up, because we're all indoctrinated into not paying any attention to the guy that's talking about liver cancer that can come from this drug or it will cause early death. We're trained to ignore all that stuff and just keep going along buying our drugs, doing what we do, and having shorter life spans, and drinking Coca-Cola. Really? You think Coca-Cola is good for anybody? Really?

I tell children put a dime in a can of Coke. Leave it there 24 hours. Pour the Coke out. Look at the dime. The lines around the dime are gone. It eats metal. What do you think it's doing to your gut and to your joints? You think it's okay to give your kids that kind of stuff? I grew up on that. Many of you listening grew up on that, but it's time to get wise now, while we still have some brain cells left.

So I'm going to close with - I'm going to give you a quote from a guy that I respected a lot; he died about eight years ago. His name was Studs Terkel. He was a writer in

Chicago; he was kind of an icon in Chicago. When Studs would leave a group of friends, he'd be walking ahead and turn around, and he'd have a cigar in his mouth, he had this hat, really classic guy, he'd turn around and he'd say, take it easy, but take it. Get informed and make decisions. Make wise decisions for you and your family. Take it easy. Be patient. Take it a step at a time, but take it.

So I want to thank Wellness Mama for the opportunity to be here today, and thank you, Olivia.

Olivia: Oh, absolutely Dr. Tom. This entire interview has been such a fantastic wake-up call, like you were saying, and you just provided us with such incredible information. I know our viewers are going to go back and re-listen to this and take notes after they make dinner and everything like that, because this is so vital to the health of not only ourselves, but like we kept talking about, the health of our children, the future generations. And so I just want to thank you for taking the time to be with us today. We are so grateful for everything that you have given us, and we look forward to chatting with you again sometime soon.

Dr. Tom: Thank you, Olivia. Thank you very much.

Thanks as always for listening to the Wellness Mama Podcast. If you're enjoying these interviews, please subscribe via [iTunes](#) or [Stitcher](#) and leave a (5 Star!) rating and review if you haven't already!