

# Personalized Approach to Microbiome Health

Tom O'Bryan, DC



**Rebekah Kelley:** Welcome to the Humanized podcast, all about personalizing your health. I am your host, Rebekah Kelley. And today I'm thrilled to have our guest Dr. Tom O'Bryan on the show, and we'll be discussing a Personalized Approach to Microbiome Health. Before I introduce Dr. O'Bryan, I want to remind everyone to subscribe and get all of our variety of casts in audio, video and transcription at [HumanizedHealth.com](https://HumanizedHealth.com). I'd also like to thank our lead sponsor, Village Green Apothecary, at [MyVillageGreen.com](https://MyVillageGreen.com).

And a little bit about Dr. Tom O'Bryan. He's a recognized world expert on gluten and its impact on health. He is an internationally recognized and a sought-after speaker and workshop leader, specializing in the complications of non-celiac gluten sensitivity, celiac disease, and the development of autoimmune diseases as they occur inside and outside of the intestines.

Thank you so much Dr. O'Bryan, for being here with us.

**Tom O'Bryan:** Thank you. Thank you. It's a pleasure. It's really a pleasure and thank you for what you're doing, carrying this message out to the world.

**Rebekah Kelley:** Love it. Love sharing. I've just actually finished your book, *You Can Fix Your Brain*, and now I've opened it back up and I'm on reading it the second time. You have so much to share, so we're so glad you're here to talk about this.

**Tom O'Bryan:** I tell people, just open the book to any page, read one paragraph. If it doesn't grab you, don't buy the book. It should be that way. It should be, what? What did he just say? So, thank you.

**Rebekah Kelley:** Thank you. So let's jump right in and give a little teaser. So what constitutes a healthy gut microbiome?

**Tom O'Bryan:** What we have to understand is the importance of a healthy microbiome. 36% of all the small molecules in the bloodstream at any one time, over one-third of everything in the bloodstream, is the metabolites or the exhaust of the microbiome in the gut. I call it exhaust. But these bacteria produce metabolites and these metabolites go into the bloodstream – one-third of everything in the bloodstream. Why? They're messengers. And the messengers, we know for every one message from the brain going down, telling the gut what to do, there are nine messages from the gut going up, telling the brain what to do. The ratio is 9 to 1. That's why the gut is called the second brain. And those messages tell the brain, make this amount of neurotransmitter, brain hormones like serotonin, make this amount of melatonin, make this much brain-derived neurotrophic factor. All of these different hormones that balance the brain are produced in the volume that is controlled by the bacteria in your gut. So, if you have too many of the wrong type of bacteria in your gut, sending a whole lot of their messages, overpowering the messages coming from the good bacteria in the gut, you make too much imbalance of neurotransmitters in your brain, you get depression, or you get anxiety. Just go to

Google and type in depression and brain function and look at all the studies that come up – because scientists are just blown away by this.

So what makes a healthy gut? It's the balance of so many of the good bacteria and not too many of the bad bacteria.

**Rebekah Kelley:** So what factors can influence then, one's microbiome composition?

**Tom O'Bryan:** Oh, it starts with being in mom's womb. We know now that mom's microbiome implants into baby in utero, so baby's initial bacteria in their gut are determined by mom. And that's why we talk about the generational influence on our health, that we can be carrying bacteria from mom, from her mother, from great-grandmother, that those concentrations of bacteria can influence how baby's brain is developing. So it starts in utero. Then the birth process, if you have a natural childbirth, we know in the last month of pregnancy, the bacteria in the vaginal tract completely changes and it becomes very dominant in something called Prevotella. Prevotella, and it's not hardly identifiable at any other time in a woman's life, only in that part of pregnancy in the vaginal tract. Why? Prevotella carries the messages as baby's coming down the birth canal covered in all of the juices of the reproductive tract. The bacteria is getting in the eyes and the nose and the mouth, baby swallowing it. And it's saying, okay, here's the code of the person who's going to be feeding you. So here's the code of the food that's going to be coming, so let's make these digestive enzymes, stomach and pancreas, let's start making these enzymes and bacteria in the gut. Let's start colonizing more of these. And that's what the bacteria in the vaginal microbiome does.

So when baby is born by a natural childbirth, baby's getting the right messages. When baby unfortunately needs to be born by a Cesarean section, like our son – it was a traumatic birth and he's really healthy now, but at that time, a last-minute emergency, born by C-section – the microbiome that he was born with was highly compromised. The studies are really clear. If you're born by C-section, the microbiome that becomes dominant in baby's gut is the microbiome in the emergency room, in the operating room. And in hospitals, there's lots of bad bacteria, and it's in the air and it's on the gloves. They put clean gloves on and clean gowns, but they've got those bacteria that's in the room. And that becomes the dominant bacteria in baby at birth. So many babies are born with a deficit.

Then, during the course of infancy and childhood, some babies, some children, require antibiotics for one reason or another. Antibiotics can be lifesaving. If they're important, you take them, but you have to recognize that the antibiotics don't just kill the bad bacteria. They also kill the good bacteria. And so if you have to take antibiotics, you need to do an aggressive approach to rebuild the natural microbiome.

And then it goes on from there, with the foods that we eat, the house that baby lives in, the air that baby is breathing. There are so many influences on baby's microbiome that it takes mom

or a family months to learn all of this and to begin adapting and transitioning their lifestyle to create a healthier environment for the family. You don't pick this up by taking one pill. Well, I'll take a probiotic. Well, that's going to help a little bit, but it doesn't fix everything. Right? So there's a whole game plan that you have to develop to rebuild a compromised microbiome or to maintain a healthy, balanced microbiome.

**Rebekah Kelley:** Wow. So what is the best way then to test or understand your own microbiome?

**Tom O'Bryan:** There are a number of good tests out there, but the bottom line is test the poop. Because... my mentor, Dr. Jeffrey Bland, and my friend, the founder of functional medicine, he says Tom, one teaspoon of poop has more bacteria than all the stars in the known universe. And he doesn't exaggerate. If we think of the numbers, that the best that we can do is look at, okay, what's the signature of this person's microbiome? Who are the dominant players? What are the most messages in the stool analysis that we're looking at?

So the test that we really like is called the Gut Zoomer because you zoom in on the problem. But there's a number of good tests out there that you can use. But the point is you have to check the poop to get an idea of what the environment in the gut is doing right now.

**Rebekah Kelley:** So once you understand then your own microbiome, I'm assuming then you're going to tailor something to then fit what you need to do to optimize your microbiome health, right? How would you go about doing that?

**Tom O'Bryan:** The rule is, it's really simple and it's the basis of functional medicine. The rule is, get the bad stuff out and put the good stuff. If you don't know what's there, you don't know, and you shotgun. You go, well this is good. Studies say that this probiotic is good, let's give him some of that. And well, maybe we'll change it with this probiotic, let's give him some of that. And that's helped. I mean, I did that for many... You know, starting in 1980, when I opened my practice, we were talking about these bacteria with names like lactobacillus acidophilus and bifido bacteria. I mean, it's Greek. It's Greek. It sounds like Klingon language and you don't know whether to welcome them or shoot them. You don't know! But now we know more.

And so it's really important, if you have a health concern, that you get a big picture overview of what's going on in your gut right now. That's critically important. So once you understand it, you've got, oh look, it says that I've got too many families of bad bacteria, and they're really a strong message, which means their exhaust is getting into your bloodstream and they're sending messages to the brain, to the joints, to the skin, to your heart, directing a more inflammatory environment. And we know all disease, in all chronic diseases inflammatory in nature, well, if you want to deal with a chronic disease, irrespective of what it is, reduce the inflammation. And the first, the FIRST place you have to go for that is the gut.

That's why at Harvard, our gastroenterologists and immunologists in the medical school are being trained right now. And the head, the chief of pediatric gastroenterology at Harvard just published a paper, All Disease Begins in the "Leaky Gut." All disease begins in the gut. That's how important it is to address the gut. That's why this topic is so critically important for everyone's health, for them and their family.

**Rebekah Kelley:** Wow, thanks, Dr. O'Bryan, those are really valuable insights. Dr. Tom O'Bryan can be found at [www.TheDr.com](http://www.TheDr.com). That's T-H-E-D-R.com. Let me remind you to subscribe and get access to all Humanized videos, podcasts and transcriptions from all of our thought leaders on personalized health at [HumanizedHealth.com](http://HumanizedHealth.com). Thank you so much for being with us.