

Functional Lab Testing for GI 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 have with me our guest Dr. Tom O'Bryan on the show, and we'll be discussing Functional Lab Testing for GI Health. Before I introduce Dr. O'Bryan, I want to remind everyone to subscribe and get all of the variety of casts in audio, video and transcription at HumanizedHealth.com. I'd also like to thank our lead sponsor, Village Green Apothecary, at MyVillageGreen.com.

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 sought-after speaker and workshop leader, specializing in the complications of non-celiac gluten sensitivity, celiac disease, and the development of auto-immune diseases as they occur inside and outside of the intestines.

Thanks for being with us, Dr. O'Bryan.

Tom O'Bryan: Thank you. It's a pleasure to be with you.

Rebekah Kelley: So jump right in. I just want to jump right in. How is functional lab testing different than conventional lab testing doctors tend to run?

Tom O'Bryan: Conventional lab testing has been around for a long, long time, 30 years, 40 years, and it hasn't changed much as a general screen. We've got very sophisticated exams now, of course, that you can do with MRIs and things like that, but the regular testing of gut function is pretty much the same. The primary thing that's looked for is blood in the stool, and if that happens, then you go into much deeper exams. Not so much evaluation of your poop, but rather going and looking inside.

Functional lab testing is completely different. It of course it looks for the emergency warnings, like blood in the stool, and every time we get some blood the stool, we send them for lower GI, immediately. Don't mess with this. Let's just rule it out to make sure there's no colon cancer starting, because it's such a common form of cancer. But functional lab testing looks at, how's it functioning in there? How is your gut microbiome, the bacteria that is so critically important? Do you have enough of the good guys? Do you have too many of the bad guys? What's the diversity?

There's hundreds of different species that are supposed to be there, and some are supposed to be really dominant. We know the reason why some people can't lose weight, even if they eat really healthy food. One of the reasons why is they got too many of the bacteria that hoards calories. So it doesn't matter what you eat, your bacteria is going to hoard it and store it for future use, even though you're eating three meals a day. Because the bacteria doesn't know about that. The bacteria is the bacteria for those that lived in desert environments, like the Pima Indians. How did they survive out there? There's no crops growing out there. They had to have really efficient utilization of anything they could find to eat. And so they've got bacteria

that's really high percentage that hoards calories. It's called Firmicutes and they hoard calories. Well, the Pima Indians today eat like the rest of us – potato chips, French fries – but their bacteria hoards calories. So their calorie-rich, nutrient-poor food – just like what's called the Standard American Diet, calorie-rich, nutrient-poor – but if you've got that kind of bacteria in your gut that's dominant, you're going to hoard those calories. So today 50% of Pima Indians by the age of 35 are obese and have type 2 diabetes. 50% of them! But it's because of your gut microbiome.

So we have to look and see how many of the good guys do you have, how many of the bad guys? We look to see, what's the pH? Are you making enough acid? If you have yeast infections, your pH has gone way up. And so if your poop is, the pH is really high, well, there's something going on in there. And then we should see some indicators of yeast also in that stool analysis. So there are many, many different things that we can discover by doing a stool analysis in a functional medicine approach.

Rebekah Kelley: So what then are some of your favorite functional lab tests that you use with the patients, so you can understand what's happening in their GI?

Tom O'Bryan: Over the years, technology keeps improving. What we're using now is called the Gut Zoomer because you zoom in on the problem, the Gut Zoomer. Very comprehensive overview. But the functional stool analysis are great. There's only one caveat that, when you do a stool analysis, to make it more sensitive, we often will induce diarrhea. You need to shake things up in there a little bit, and then you get much better representation of what's going on in there, as opposed to a standard stool analysis. Many doctors know about that, it's called a provocative challenge, to stir things up. But there are a number of them that are really useful and beneficial. We've used them over the years, on occasion we will, but the go-to right now is the Gut Zoomer.

Rebekah Kelley: So what key things can you learn then, when doing functional lab testing?

Tom O'Bryan: Oh... well, we know that 36% of all the small molecules in the bloodstream come from the microbiome in your gut, the bacteria in your gut. So a third of everything in your bloodstream is... and that there are messengers going everywhere. Your heart, your heart rate rhythm is determined by the messages from the gut microbiome, your brain function, the brain hormones are determined by the gut microbiome.

So when we look at the gut microbiome, it gives us so much information about how your kidneys are functioning. Are they getting bad messages? Is the heart getting bad messages? Is your brain getting bad messages? Just go to Google and type in depression and inflammation and you see that every case of depression, every single one of them, unless there's an acute trauma or something like that, but long-term, every single case is an inflammatory condition.

And that inflammation comes from the gut. Whether it's depression, anxiety, schizophrenia, bipolar, Parkinson's Alzheimer's - it's inflammation and the inflammation initiates in the gut.

Rebekah Kelley: So then how do you tailor your recommendations, based upon this information that you're gathering?

Tom O'Bryan: Oh, right. So if you, for example, you have too much of the bacteria that hoards calories, you have to modify your food selections for a while. It takes anywhere from 3 months to 6 months to really turn around an established microbiome. So your food selections have to be a little different. There are some supplements that can help, it but depends. You don't want to eat a lot of starchy foods if you're hoarding calories because, well, sweet potatoes are supposed to be healthy for you. Well, of course they are. But you don't want to eat a lot of sweet potatoes if you've got a lot of Firmicutes because you're going to hoard all those calories.

So you want more vegetables and lean meats and quality meats, and fish. So it depends on what your results are. You really can't shotgun this so much anymore. You know, I grew up in the '60s in Detroit and there was a song, *Shotgun*. "[Sings] Shotgun..." It was a great song. And when I came out in practice, we were shotgunning probiotics into people, giving them lactobacillus and bifido because, well, they're supposed to help, and then the studies started coming out that it helps.

You don't shotgun anymore. You look for the indicators of what specific probiotics supplements can be helpful for this individual, with what they're currently dealing with. My son unfortunately, was born by C-section, an emergency C-section, and so his microbiome was at a deficit to begin his life. He's 7 months old now, and he's healthy, everything's great. But I'm checking his microbiome and I'm determining what probiotics to give him on a monthly basis so that we're being tissue target specific. And the technology is now available to do that for all of our patients. And if we do the proper functional medicine stool tests, we get the information so then we then can determine what's the best supplement that's going to help you along with the dietary recommendations I'll give you today.

Rebekah Kelley: Awesome. Thanks Dr. O'Bryan. Those are really valuable insights. Dr. Tom O'Bryan can be found at wwwTheDr.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. Thanks for being with us.