How Your Gut Health Directly Influences Disease Transcript

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Introduction and Dr. Tom O'Bryan's Background

Welcome to the Cancer Breakthroughs Summit. Today, I am thrilled to talk with Dr. Tom O'Bryan with Dr. Tom about the role of cancer in relationship to autoimmunity, to gluten sensitivity.

But maybe more important to have his wisdom from teaching and training tens of thousands of people in trying to see the underlying current, underlying big picture that drives symptoms.

I really am thrilled to talk to you today, but really, what is the big picture of cancer? So, Dr. Tom, welcome to the summit. And maybe before we start, you can take a few minutes to tell us about your background and your interests.

Oh, thank you. Thank it's a pleasure to be with you for such an important event. My background. Well, about 45 years ago, I was an intern and my wife at the time and I we could not get pregnant.

I called the seven most famous holistic doctors I'd ever heard of and asked, What do you do for infertility? They told me what they do. I wrote it all down and I put a program together.

We were pregnant in six weeks. My neighbors and married housing. We lived on campus and they had been through artificial insemination. Nothing had worked for them.

And as you know, you spend tens of thousands of dollars trying to get pregnant and have a healthy pregnancy. They asked if I'd work with them and I said, Well, I don't think it's going to hurt you. Okay.

They were pregnant in three months, so now we're four months pregnant. So happy telling all of our friends and our friends sister in Wisconsin would drive down to Chicago.

I was in school in Chicago, drive down to Chicago because she'd had three miscarriages and no one could help her. Please, please, can. Can you help me?

And I was treating people out of my dorm room. You know, you're not supposed to do that. But I was doing that. And so I came out into practice with this passion to help people with reproductive issues.

And there's not much in medicine, that's all or every.

Inflammation as the Root of Chronic Disease

But this was every every couple that was having problems with reproductive issues, hormone imbalances, premature ejaculations, infertility, recurrent miscarriages, ovarian cysts.

It didn't matter. Every couple, as one of the contributors to their problem, they were eating foods that did not make them sick when they ate them. But those foods were causing inflammation in their body, every couple.

So that's how I came into practice understanding this concept of inflammation. And now we're 45 years later, now the science is out. The Center for Disease Control tells us that 14 of the top 15 causes of death are chronic inflammatory diseases, including cancer.

It's inflammatory. Every single cancer doesn't matter what type of cancer. They're all inflammatory And it's 14 of the 15 top causes of death. So one of the things we always, without exception, have to work with in the beginning stages of dealing with whatever disease or disease we have, we have to ask the question, where is the inflammation coming from?

You, of course, always want to deal with the symptomatology. So you feel better and you function better. But you must identify, how am I throwing gasoline on the fire?

Where is it coming from? Is it the food that I'm eating? Well, I feel fine when I eat wheat. Well, it doesn't matter how you feel when you eat wheat, because for how do I say this?

The ratio is 8 to 1 according to the science. For every one person that has gut symptoms as the manifestation of their problem with wheat, there are eight people that don't have gut symptoms.

They've got brain symptoms or thyroid symptoms or skin symptoms or joint symptoms or hormone imbalances. They don't have gut symptoms, so they eat the food and they think, Well, I don't feel sick when I eat the food.

It's fine for. No, it's not. The only way, you know, is to check your immune system because your immune system is the armed forces in your body. It's the army, the Navy, the Air Force, the Marines, the Coast Guard.

We call it IGA, IGG, IGE, IGM cytokines. They're all just branches of the armed forces trying to protect you. So the question is, what is it trying to protect you from?

Right. So you always have to include in your protocols. How am I throwing gasoline on the fire? It's critical. With any disease you have, including cancer, you can take the best new age treatment protocols that help reduce your symptomatology and shrink the tumor.

But I can guarantee you, if you keep living the lifestyle unknowingly that's throwing gasoline on the fire, your problems are going to come back in the same place or somewhere else.

One more concept, because when you pull in a chain, the chain always breaks at the weakest link. It's at one end, the middle, the other end, it's your heart, your brain, your thyroid, your kidneys, wherever the weak link is.

That's where the chain is going to break. So if you get diagnosed with a tumor of the kidneys, that's the weak link in your chain. And so one of the things you have to do is stop pulling on the chain so hard.

Well, what does that mean? Or the pull on the chain is inflammation. So you have to identify where is the inflammation coming from, because if you do the symptomatology relief, if you have surgery to remove the tumor or some new medication or some new protocols to reduce the symptoms of the cancer of the kidney, if that's the one you have and you put the symptoms down in remission and you're still pulling at the chain, it's going to pop at the next weak link.

Wherever that weak link is, you have to stop pulling on the chain so hard. And that means evaluate your lifestyle and how am I throwing gasoline on the fire?

So I'll pause there now. But that is a critical beginning, 101 concept for any disease that you have. So it can tell you Dr. Tom how correct you are for my 40 years of experience and my research work, it's important for the listener to understand in integrative oncology that there is a great attraction to shrinking the tumor with this treatment, with their treatment.

Autoimmunity, Toxins, and Cancer Mechanisms

But if you are not changing the underlying causes, which usually it's less expensive to do, it's often it's simple if you have the complex understanding to find the simplicity.

And in this you raised two very important issues. Inflammation is a fire inflammation that our body solution to deal with. The problem in this fire is really a response to our survival needs.

And so we have alarming protein. We have survival protein. One of them, Galectin-3. I'm the pioneer in researching and we can see now in research in animals that when we pull just galectin-3 out, just galectin-3 through apheresis,

there is no sepsis in the animal.

We can stop sepsis, the whole cascade. And really what you're doing is let's look at the lifestyle that made us go into a survival mode, that made our body.

And the other concept that you brought up is a weak link for the primary tumor, but the same wing link will determine which organ is going to be the first metastatic organ.

These stance when somebody is being diagnosed, work on your weak links and you will prevent your metastatic process. So these are really words of wisdom and it really and I truly appreciate them.

So tell us a little bit and we can revisit that gut. It's a great topic. I mean, it's all interview and it's on a conversation between us. But let's talk about autoimmunity.

If I feel that you really work a lot with and how does autoimmunity relate to cancer? Cancers are always auto immune. There's always the aspect of your immune system attacking the tissue.

It doesn't matter what tissue it is, but it's your immune system attacking the tissue. So why is the immune system attacking that tissue? I'll give you a simple example.

It may relate to the person. It may not as an individual, but the example gives you the idea. We've all heard of this chemical called bisphenol a, BPA.

And so we avoid the plastic water bottles because we know if the water bottle sits in the sun. And while I don't put my water bottles in the sun really well, what about the supermarket?

When you go around the backside where they're making deliveries, you see the cases of water sitting out that have gotten off the truck, but they're not taken inside yet.

And the sun is shining on them. You know that you don't have complete control. But when we drink the water out of a plastic water bottle, we get bisphenol A, so bisphenol A when it gets into your bloodstream, one of the places that it can grab a hold is on the cells of your thyroid.

If it grabs a hold to the cells of your thyroid as one example, there are many other tissues that bisphenol A will grab on to, but when it grabs on to the cells of your thyroid, for this example, you now don't have a normal thyroid cell.

You've got what's called a neo epitope. It's a new cell in your body. It's not your thyroid telling what's your thyroid. So with this crud stuck to it and your immune system says, What's that?

I better fight that. That's not something normal for me. So your immune system now makes antibodies to fight that neo epitope, to fight that new cell thyroid BPA together and the antibodies that are made attack that new cell.

Now you've damaged the thyroid cell and you've broken up some of that BPA. Now your body says, I've got to get rid of that old and damaged cell that damaged thyroid cells.

So now you make more antibodies to your thyroid to get rid of that old and damaged cell to make room for new cells. Now you've got more antibodies to your thyroid.

Now that's not the problem, except you drink water out of water bottles every day or you're brushing your teeth with toothpaste. It's got bisphenol A in it every day, or you're sleeping in a bedroom that's got plastic blinds and the plastic blinds.

Oh, gas. These bills finally molecules into the air and you're breathing them every day. So this is a constant mechanism that's going on. And if you're a weak link is that it grabs on to your thyroid.

Now you're making more thyroid antibodies because of board neo epitopes being formed because you're being exposed to it every day and you make more antibodies to your thyroid and eventually you've got what is an auto immune disease of your thyroid called Hashimoto's or graves.

And the examples in organophosphates, the insecticides and the pesticides in the conventional fruits and vegetables that we're eating, we get all these lousy chemicals that are grabbed on to the food, the antibiotics that are on the food, because they spray the fields with antibiotics before they harvest to keep the bugs off of them in transport.

And we're getting all these chemicals in our conventional food. If you're not eating organic, then these chemicals were exposed to accumulate in our bodies.

And then your immune system trying to protect you is trying to get rid of these chemicals. And here comes this whole cascade of inflammation, inflammation, inflammation, inflammation that doesn't stop.

And if the weak link in your chain is your kidneys, in the example I gave you earlier or your thyroid, if you're a comes thyroid cancer, here comes tumors of the kidney, here comes the gallbladder.

Okay, it doesn't matter. The mechanism always includes inflammation. Yeah. So as you learn where your sources of inflammation are coming from and you reduce your sources of inflammation, you do much better.

Your body gets stronger, it gets healthier while you're doing whatever other protocols you're hearing about in this summit and in other areas, because you're researching this now, where is my inflammation coming from?

And as you keep reducing your sources of inflammation, your body just feels better, it functions better, you look better. Your friends say, Wow, what happened to you?

Say, Well, I found out that I was allergic to these foods, that I never knew that gluten was a problem for me or Jerry because I didn't get sick with them.

But I did a blood test and I found out my immune system is fighting gluten and dairy and I stopped and I lost £15 and two months without dieting, you know that.

You just find your body starts getting healthier. And then for the body and this goes all the way to your membrane metabolism, to your production of energy in the cell, and specifically for the thyroid.

The thyroid that needs iodine, which is negatively charged, can really exchange these bromides which are used heavily in pesticide and with fluoride. And here you get specific leads and negatively challenged.

We always talk about the heavy metals, but they are the negatively charged and there are going to first, you know, it's a great topic. And you started by talking about the gut and people don't realize the gut is our biggest body surface with the environment.

You know, you can eat something in your mouth, it will come through your anus and it never was a part of your body. So the gut is an ongoing relationship.

And in this way, gluten inflames the gut lining. But in another conspirator, that makes things worse. And I would love to get your opinion about it is glyphosate and you cannot escape from life with it, even with organic foods because it's much better.

And you know, you probably had many patients who tell you, well, when I go to Europe, when there is no glyphosate, I can eat gluten. So what is what is your feeling about the relationship between glyphosate, gluten sensitivity and maybe some of your dietary and lifestyle regimens to address this?

Yes, thank you. I will answer the question first about Europe. I want to clear that up right away.

Glyphosate, Gluten, and Leaky Gut

When people have a problem with wheat and they have got symptoms bloating, gas, abdominal cramps, diarrhea, constipation, gut symptoms, the vast majority of the time, the reason they are having gut symptoms is not because of gluten.

It's not because of the proteins. It's because of another component in wheat called the fodmaps, the fermentable carbohydrates in wheat. And it's the fodmaps that cause the bloating and the gas and the abdominal cramps and the constipation, the diarrhea.

It's the fodmaps that from wheat that cause the symptoms where you feel bad or you feel bloated after you've wheat. Well, the wheat in Europe is much lower in Fodmaps, so you don't get the symptoms because it's a different type of wheat over there also is doesn't have glyphosate, but that doesn't deal with the bloating in the gas.

It's the low fodmaps in the Europe in wheat. Why people can go to Italy and eat the bread and feel fine. The problem is the proteins in wheat, the gluten proteins active aid, the immune system.

So you're still going to pull on the chain and if the weak link is your kidneys, you're still going to have kidney problems or thyroid problems, even though your gut doesn't feel bad because you eat low-fodmap wheat.

So you can't go to Europe and eat the wheat. If your immune system already says you have a problem with wheat irrespective of how you doesn't matter how you feel, it's really doing the accurate blood test that tells you is your immune system fighting wheat.

Now about glyphosate, the problem with glyphosate, one of the problems with glyphosate is that and I saw an interview with a French television station in English, but they were interviewing the lead scientist from Monsanto, the company that began producing glyphosate.

And this was maybe eight, nine years ago. And the scientists was saying, glyphosate is fine, you can drink it. It's not a problem for you. And the interviewer said, Well, I'm glad that you said that, sir, because I happened to have a gallon of life phosphate and he pulled up about a gallon of Roundup and a glass.

May I pass them in the glass and you can demonstrate to us what you've just said as the lead scientist for Monsanto. And and the guy looked at him and said, this interview is over and stood up and walked off the staff of the studio.

Right. Because he was lying through his teeth. The problem with glyphosate and there is no evidence that it damages human cells, from what I understand in reading the science.

But what it does do, it damages the good bacteria in your gut quickly. And when when you damage the good bacteria in your gut, when you kill the good bacteria, your gut.

Listen, all disease begins in your gut. I don't care if it's cancer. Apocryphal. You said this thousands of years ago. Let me tell you about Professor Alessio Fasano.

Professor Fasano is a professor of medicine, Harvard Medical School. Professor of nutrition, Harvard School of Public Health, the chief of Pediatric Gastroenterology at Mass General at Harvard.

The Director of the Celiac Research Center at Harvard. The Director of Mucosal Immunology. Harvard. Five Titles Any one title is a lifelong goal for someone at the top of their game.

He has five. It's unbelievable, this man. Unbelievable what he does. And how brilliant he is. He he's always so careful of what he says so that he's not misquoted.

But it was him in his team in 1997 that identified the protein Xinyu Lin as the mechanism by which leaky gut

happens, this thing called leaky gut. They identified how it happens.

And for the last 25 years I've been publishing paper after paper after paper, educating all the physicians and health care practitioners about this thing, leaky gut and its effect on every disease.

Fasano was always so careful about what he says always. But listen to the title of the paper that he wrote two years ago. All disease begins in the leaky gut, the role of Zombieland in the development of chronic inflammatory diseases.

Now, 14 of the 15 top causes of death are chronic inflammatory diseases. And here we have Professor of Medicine, Chief of Pediatric Gastroenterology at Harvard saying all disease begins in the gut.

So he explains the mechanism by which chronic inflammatory diseases occur. And this is now what they're teaching at Harvard Medical School. It's so wonderful that they're teaching this to our young doctors who will be coming out.

Professor Fasano talks about the perfect storm in the development of chronic inflammatory disease, including cancer. The perfect storm. How does it happen?

First, you have your genetics. There's not much that you can do about that. That's the deck of cards that you've been dealt in your life. Your mother had breast cancer.

Your grandmother had breast cancer. You may carry the gene for breast cancer. It doesn't mean you're getting breast cancer. It means it's a weak link in your chain.

Now, the thing about genetics, you can't turn genes on and off, but what you can but genes operate on dimmer switches and you can dim down the genes of inflammation and turn up the genes of anti inflammation.

And that's why, you know, we knew back in the early 1990s, one cup of blueberries a day for three years, once a day for three years. And your brain's working as well as it was 13 years earlier because you're turning down the genes of inflammation in your brain.

Right? So genes operate on dimmer switches. That's the first thing. Number two of the perfect storm, what rate, what little turns the genes up or turns them down?

Number two, environmental triggers. Everything we're exposed to either ramps up the genes of inflammation or ramps up the genes of anti inflammation, turns down the genes of inflammation or turns down the genes of anti inflammation.

Everything you're exposed to in the environment has an effect on your genes, ramping them up, calming them down. That's number two. Now, the most common source of environmental triggers is what's on the end of your fork that's most common.

There are many others. The air you breathe. I talked about phthalates in the air. If you've got plastic blinds on your windows and many flame retardant chemicals from the sofa are Scotchgard, stain resistant chemicals on your furniture, formaldehyde in your nightstand, and the kitchen cabinets.

If they're not solid wood, if they're pressed board, they're soaked in formaldehyde. And all of this stuff is in the air that you're breathing. Those are all environmental triggers that you have to identify.

Am I sensitive to that? You have to learn how to test for these and see what your immune system is fighting. But it's the environmental triggers that have their hands on the knob of the dimmer switch, turning them up or turning them down.

Number three, when you have too many inflammatory environmental triggers, you alter the microbiome, you alter

the good guys in the gut, and you get way too many bad guys.

Like if you eat conventional fruits and vegetables that are GMO foods and they've got glyphosate on them, that alters the microbiome. You kill the good guys in the gut and you get too many bad guys.

That's number three. It's called dysbiosis, ptosis. It means not enough good guys, too many bad guys in your gut. That's dysbiosis. Now, 36% of all the small molecules in the healthy bloodstream are the exhaust of the microbiome.

In your gut, what do I mean by exhaust? You know, if you exercise too hard and the next day your muscles sore, you know, that's lactic acid. You know, you just didn't flush out all the lactic acid because you exercise too hard.

That's the exhaust of your muscle cells. Your bacteria have exhaust all day. They're called short chain fatty acids, nucleic acids. There's many types of exhaust that the bacteria in the gut produces.

So if you have too many bad guys, the exhaust is inflammatory, bad guys, they create more inflammation throughout your body. That's number three is dysbiosis.

Now, number four, Mrs. Patient, your digestive tract is a tube, starts at the mouth, goes the other end, kind of winds around in the center there. If you think about a donut, if you had one big long donut and you could look down the donut when you swallow food, it's in the tube.

It's not in the body yet. It's still in the tube. Like you said earlier, it's in the tube. Well, how does the food get through the walls of the tube into the bloodstream?

So you get the vitamins and the minerals and everything you need. How does that happen? Think of proteins like a pearl necklace and the acid in your stomach and does the clasp of the pearl necklace.

Now you have a string of pearls and the enzymes that start with your saliva. That's why we have to chew. They act like scissors to snip that pearl necklace.

Smaller and smaller and smaller. Snip snip snip snip snip. Until you're down to each pearl of the pearl necklace, we call that an amino acid. Now, the inside lining of this donut, the inside lining is lined with cheesecloth.

So only really small molecules can get through the cheesecloth to go into the bloodstream. And until they've been broken down small enough, they keep going further down the tube being snip snip snip snip snip that's why your guts 25 feet long is that it takes a whole lot longer to digest a hamburger than it does the banana.

You actually got to snip snip snip, snip, snip. So eventually they get small enough to go right through the cheesecloth into the bloodstream. That's how we absorb our food.

Rebuilding the Microbiome and Diet for Cancer Support

Now, we've talked about genetics, environmental triggers, too many bad guys, not enough good guys, dysbiosis, but now if you have dysbiosis, you've got all this inflammation in your gut.

You tear the cheesecloth. When you tear the cheesecloth, that's what we call leaky gut. Now, these molecules go right through the tears in the cheesecloth into the bloodstream.

And your bloodstream is just a highway. You know, all the traffic is going in the same direction, but it's just a highway. And now you've got these big molecules called macromolecules that got through the tares in the cheesecloth into the bloodstream.

And your brain says, What's that? That's not something that I can use to make new brain cells or bone cells or muscle cells. I better fight that immune system, take care of that.

And now your immune system makes antibodies to chicken or to tomatoes or to beef or to cucumbers. It doesn't matter what the food is. If it went through the tears in the cheesecloth, leaky gut, boom.

Now you're now it's in the immune, now it's in the bloodstream. And your immune system trying to protect you creates inflammation to fight this thing that shouldn't be there.

That's number five. Chronic systemic inflammation, all disease begins in the gut. 14 of the 15 top causes of death, including cancers, are chronic inflammatory diseases.

But here we have Professor Fasano at Harvard, five titles. All disease begins in the gut. So it doesn't matter what disease you have. Part of the protocol to deal with whatever diagnosis you have.

Part of the protocol is you have to rebuild a healthy gut. You've got to stop your exposure to those inflammatory things like glyphosate. You have to stop the exposure or reduce it dramatically, eat organic, and you have to build a healthy, diverse microbiome.

Once again, this is what they're teaching at Harvard Medical School right now. And it's just so exciting and it's much, much more complicated than this.

But it's a five step process. Professor Fasano calls it the perfect storm in the development of chronic inflammatory diseases. Thank you. That's amazing.

You know, it's it's the cytokine storm is a version of this and that. Yeah, it's really remarkable. What's interesting historically is old timers is that if you mentioned leaky gut 30, 40 years ago, they would crucify you.

It's nonsense. And now it's turning around. You know, the gut brain connection is in ancient Chinese medicine concept. And now finally we are recognizing the same boundaries.

So yeah, these are all profound things. And I think you gave a lot of you really gave the audience a roadmap. Do you want to add some more specifics about like, is there anything specific that you think is critical for the cancer patient?

You bet. You bet. The good guys in your gut, the good bacteria, they do so many important things for you. I mentioned earlier 36% of all the small molecules in the blood are the good guys exhaust, which means they're going in the bloodstream and they're turning up the genes of anti inflammation, turning down the genes of inflammation.

But if you have too many bad guys in your gut, it's the exact opposite. And so if the weak link in your chain is whatever cancer you've been diagnosed with, one of the things you have to include is rebuilding a healthy gut.

Now, when you go through chemo or radiation, one of the side effects so often, unfortunately, is it kills the good guys in your gut. And that's unfortunate that that happens.

But you have to rebuild. You have to rebuild a healthy, diverse microbiome of the good guys. Critically, critically important. Now I'm going to tell you about a study in the Journal of the American Medical Association that doesn't relate to cancer, but it relates to everything.

In the topic of the study was couples going to assisted fertility centers because the most sensitive tissue I think I don't think I've found a study on this, but I believe the most sensitive tissue in the entire body is the sperm and the egg when they first meet.

And the development of this new life force, very, very sensitive. Second after that, I think, is the brain very, very sensitive. Third after that is any cells that are damaged and inflamed like cancer cells, wherever it is in your body.

But I'm going to give you the example with what I think is the most sensitive tissue in the body, the fertilized egg.

And then you can understand how that might relate to you with whatever symptoms you're currently having.

So The Journal, the editors of the Journal of the American Medical Association, they wrote a little comment and said, this is an elegant study using sophisticated biomarkers to prove their point.

Now, the editors of the Journal of the American Medical Association don't say that very often. They don't give a stamp of approval to one study like they did for this.

So I saw that. And I said, Oh, okay, well, this is an interesting study. I have to read this. And they looked at couples going to assisted fertility centers.

And you may know they spend tens of thousands of dollars trying to get pregnant, never covered by insurance. And there's very stressful and emotional for these young couples.

And they ruled out all of the possible contributors to success or failure that they could think of being overweight, being underweight, hard drinking, alcohol, smoking, cigarets, race, creed, socioeconomic status.

They ruled all of that out in an elegant study using sophisticated biomarkers. They ruled all of that out. And they looked at one thing how many servings of fruits and vegetables was the woman eating per day?

It's all they looked at. And it was shocking what they found out. They divided them into fourths, the lowest, the next, the third and the highest servings of fruits and vegetables per day.

And what they discovered, those people eating conventional fruits and vegetables, meaning sprayed with glyphosate. The insecticide into the pesticides, all the carrots you buy, all the lettuce you buy, all the tomatoes you buy in the local supermarket.

If they're not organic, there are conventional and they've got all these chemicals on them. You can't taste them, you can't see them. But they've got these chemicals and they they put them into fourths into how many servings of conventional fruits and vegetables a day.

What was shocking was that if you were in the highest category of servings of fruits and vegetables per day, you had an 18% less likelihood of successful implantation compared to those women with the lowest amount of fruits and vegetables per day.

The more fruits and vegetables you ate, the less likely you were to get pregnant. But if you did get pregnant, the more fruits and vegetables you ate per day, 26% less likelihood of a live birth, meaning you lost the baby miscarriage or stillbirth compared to the women in the lowest amount of fruits and vegetables per day.

Now, that's completely opposite of what everybody thinks. We all think the more fruits and vegetables, the better. But then they looked at people eating organic and it was the exact opposite.

The more fruits and vegetables you were eating, the higher the success rate of healthy pregnancy and healthy baby. Now, here's the kicker to all of that.

So there's two points to take home. First, conventional fruits and vegetables. You have cancer. You want as much organic as possible, fruits and vegetables.

Whenever you can, you eat organic. And second, to fall in the category of organic fruits and vegetables. In this study, the women were eating three servings per week of organic fruits and vegetables, three out of 21, not three times a day, but three meals per week were organic.

That's all it took, mostly because people who are eating organic, they, you know, they're trying to be healthier. So they're probably doing some other things in, you know, but just three times a week.

And you had much, much more success with the most sensitive tissue in the body. This is so important because there are some people with cancer, the juice and the juice with conventional.

Let's say that because you are basically collecting pesticides in a concentrated manner that gets they get absorbed so quickly. There's no fiber to slow it down, you know?

Yeah, exactly. Yeah. And I want to touch on the microbiome for people to realize the microbiome is really you know, we have 50 trillion cells in our body that work in harmony.

It's a miracle, you know, Dr. Tom, but we have a relationship with 100 trillion organisms in the gut. It's a symbiotic relationship. And as long as we respect it, they will help us.

And just to give a sense, we know that immunotherapy doesn't work when the microbiome is disturbed. We know that if you give a dose of antibiotic, when you give somebody adriamycin doxorubicin the most common chemo, the chemo will not work.

They microbiome has wisdom to even activate drugs that are good for us.

Practical Lifestyle Changes and Resources

And as long as we respect them, this is part of turning the anti-inflammatory on is not only diet, it's also emotional. Our psychological, our spiritual, psychological viewing of be more acceptable.

And in part of it, when we can avoid the struggle, we can avoid the fight. We avoid the the the inflammation, like you said. So these are all really important thing.

And I really want to thank you for that, for the wisdom that you shared with all of us. And please, maybe you can share with us where people can find more about you, your work and these unique educational opportunities.

Well, thank you so much. And if I could make one comment and what you said, I don't know. There's anything more critical than rebuilding a healthy, diverse microbiome with any disease that you've been diagnosed with.

It's critically important that you include building a health of the diverse microbiome. Critically, critically important. And so I've got books on all of this.

We've got so many videos. Our website is thedr.com. The D. R. don't spell the word doctor out, T H E D R.com and everything's free. There you can see where to get the books on Amazon.

You know, there's a link that you can click for that and I explain all of it with these kinds of analogies in our books. My most recent book is called You Can Fix Your Brain, and it was number one in seven categories on Amazon for brain function.

And it's really I'm very proud of this good book and there's 36 different things to do in there. You know, this thing unfolds. For example, you store food in a left over plastic container in the refrigerator.

The next day, the chicken's got phthalates in it from the container. What? So what do you do? You get glass storage containers. So I gave you three URLs for glass storage containers in the book and you go to mileskimball.com and Amazon and whateverthe third one is, I don't remember.

And you say those are okay. Oh, I like those. And you order three round ones, two square ones, one for the pi pay with your credit card and you know you're done.

That's all it takes when you've got cancer. It's so overwhelming to deal with. It's so extremely overwhelming. The subtitle of that book, You Can Fix Your Brain.

The subtitle is just one hour a week to the best memory, productivity and sleep you've ever had. So you can't sleep now you can't live your life when you've been diagnosed with cancer.

I mean, it's in your face all the time, but one hour a week you allocate to doing something like order glass storage containers, then you're done for the week next week.

So you tell your family, Don't bother me. Tuesday nights after dinner, I'm going to study a little more and how we can be healthier. Next week you look at the nail polish because families from nail polish are in your bloodstream in 4 to 5 minutes.

Organic nail polish. Organic cosmetics organic cleaning stuff in your home. And we've got all of that stuff in that book where to go to get those things right.

But every week you just do one thing one hour a week, and in six months you've changed your life and your environmental triggers are no longer activating so much inflammation while you're dealing with everything else that you have to deal with.

But just one hour a week, that's all I ask of you. And you will find six months down the road you've done this, your inflammation way down. So the website is thedr.com. Amazing.

You know, it's so true. And you know, Dr. Tom, cancer patients are so overwhelmed and sometimes they have to spend hours a day. And really what you offering is the reason why one hour can work, because small change has an ongoing effect.

You know, it's less contained and doesn't go away. It's always going to be there. So really thank you so much for for joining us and for showing you always doing this.

Thank you so much. It's a pleasure to be with you.