



The Solari Report

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Solari Wellness Series **Microbiome 101** **and Why We Should Care** **With** **Brigitte Mouchet** **&** **Dr. Tom O'Bryan**





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Brigitte Mouchet: Hi! I am Brigitte Mouchet, and it is an honor for me to be hosting the first episode of The Solari Report Wellness Series.

As the first topic, I chose the microbiome because the health of the microbiome is related to so many aspects of our physical health, but also our emotional and mental health, that it seemed like it could be the root cause of many of the health problems that the world is facing today.

I wanted to understand what we could do at an individual level to protect our microbiome, keep it healthy, and increase our well-being. To help us with that, I invited Dr. Tom O'Bryan, a health advocate and an expert in the field of gluten-related disorders and their link to other chronic conditions, including autoimmune disorders and diseases.

He wrote a book on this topic, *The Autoimmune Fix*. Dr. Tom has been focusing lately on the connection between the microbiome and brain health. His latest book, *You Can Fix Your Brain*, just came out.



He is a board member of the Holistic Nutrition Credentialing Board for the National Association of Nutrition Professionals, and he holds teaching faculty positions with the Institute for Functional Medicine and the National University of Health Sciences.

He is a respected and highly appreciated speaker. He is on a mission to educate patients and healthcare professionals around the world.

Dr. Tom, welcome to The Solari Report Wellness Series.

Dr. Tom O'Bryan: Brigitte, thank you so much. It's a pleasure to be with you.

Mouchet: To get started, I would like you to set the stage for our discussion and explain some of the basics about the microbiome so that everybody can follow. So, what is the gut microbiome?

O'Bryan: That is such a great topic. First of all, it's an honor for me to be your inaugural interview for this series. And it thrills me that this is the topic you chose because if there is one system of the body, if there is one organ of the body that has more control over everything else, it is the microbiome. In the last ten years, researchers have agreed that the microbiome is an organ in itself. It fits all the definitions of the organ, meaning that it produces hormones, it has a function that impacts not only itself but the entire body.



So, what is the microbiome? The microbiome is not just in our gut, but primarily in our gut. Seventy percent of the entire immune system in our bodies is in our gut. Most of that is the microbiome. It has antibacterial properties and antiviral properties to protect us.

If you think about our ancestors, we have the same bodies as our ancestors did thousands of years ago. What was it that our ancestors' immune systems had to protect them against?: Bugs, parasites, viruses, molds, and fungus. That was it. There was nothing else.

Our immune systems are exactly the same. Our immune systems are designed to effectively help us against bugs, parasites, viruses, molds, and fungus. But in the last few generations – really the last two generations, and for some, it is three generations – we have a new threat to the human body never before faced in the entire history of the human civilization. That new threat is the inordinate amount of chemicals that we are exposed to on a constant basis.

The Journal of Pediatrics tells us that it is 250 pounds of toxic chemicals per person per day that is being dumped in the United States. That is 250 pounds per person per day. For a family of four, that is 1,000 pounds of toxic chemicals per day. That is twenty 50-pound bags stacked on top of each other every single day, seven days a week, 365 days a year. Every single day that amount of chemicals is in our environment.

The result of all of that is that we now know babies born today in America – every baby that is checked – has an average of 180 toxic chemicals in their bloodstream at birth.



There are 180 toxic chemicals that are not supposed to be there. Many of them are neurotoxins, and many scientists are concerned that these neurotoxins impact brain development and brain function.

I am looking at a study here as I am speaking to you from the *Journal of Physiology* from 2017, and one of the comments that they write in here is that “Neurogenesis,” which means the development of your nerves, the growth of your nerves in your brain and throughout your body, “is regulated by the microbiome.”

With our microbiomes, for every one message from the brain going down to the gut, telling the gut what to do, there are nine messages from the gut going up to the brain, telling the brain what to do. So, our brain hormones, called neurotransmitters, are completely modulated. That is a great Scrabble word that means I’ve got my hands on the steering wheel, and it’s the microbiome that has their hands on the steering wheel of how much neurotransmitters our brains make.

So, when you have anything that affects the microbiome, like the toxic chemicals in the food that we are eating, in the water we are drinking and the beverages we are drinking, all these toxic chemicals that go down into our gut, impacting on microbiome quantity, quality, and function, it impacts on the rest of the body. It is the most researched field in preventive healthcare today. There are literally hundreds and hundreds of studies coming out every year now.



You think of that, and those are hundreds and hundreds of research teams spending months and months studying one topic. One topic, for example, is antibiotics. If you need antibiotics, you take them. The problem is that antibiotics deplete the microbiota. They deplete the good bacteria in their gut. I'm looking at the same study from the *Journal of Physiology* right now, and they say that antibiotic administration, which depletes the microbiota, decreases neurogenesis. That means the growth of new nerve cells and the growth of new brain cells.

Every cell in your body regenerates – every single cell. Some cells are very quick, as the inside lining of your gut, which regenerates every three to five days. Some cells are very slow. Bone cells are slow. Brain cells are slow, but we do know that every cell regenerates. However, if you have to take antibiotics for some reason, and we haven't learned how to address the complications that occur from the antibiotics, what happens is that you decrease neurogenesis. You decrease the growth of new nerves.

If you need antibiotics, of course, you take them, but you have to be aware that there is some work that you have to do afterward.

I will just tell you one more thing about the title of this first article that I pulled up for you today. The title is 'Gut Instincts: Microbiota as a Key Regulator of Brain Development, Aging, and Neurodegeneration.' That pretty much says it all when you are talking about microbiota and the brain. As the title of this article says, it is a key regulator. It has its hands on the steering wheel of your brain growth and development.

I will pause here because I can go on and on.



Mouchet: That is really, really important. If we can go back to the original state of the microbiome, what should it look like? What should a healthy gut microbiome look like?

O'Bryan: That is a really good question. The most important component of that kind of an answer is diversity is the magic word. We want diversity – just like our ancestors never ate the same food again and again and again. Our ancient ancestors were nomads. They followed the herds so that they would always have a source of food, and sometimes they would find some berries, and sometimes they would find some roots, and sometimes they would find some vegetables.

The different foods that we eat change your microbiome in one day. In one to two days, you have an altered microbiome from the foods that you eat.

So, what should it look like? It should look very diverse. That is most important. That is why one component of the protocol to heal the gut that we talk about is, “Mrs. Patient, when you go shopping, and you are in the vegetable aisle, always buy organic. Of course, that is very important for many reasons,” and we may get into that here. For now, we will just say, “Always buy organic fruits and vegetables, but buy a couple of every root vegetable that is there. Get rutabagas, turnips, parsnips, Jerusalem artichokes, multi-colored carrots, sweet potatoes, yams, and other types of root vegetables – whatever they have.”



Every day you have at least one root vegetable because the microbiota – a technical term for the bacteria in the microbiome – is called probiotics. Those are the good bacteria in the microbiome. They are probiotics. What we always want to do is have adequate amounts of prebiotics in our diet because it's the prebiotics that feed the probiotics. It is what keeps them healthy and keeps the diversity.

By altering the root vegetables that you eat every day, you are feeding different families of bacteria in your gut – and there are thousands of families of bacteria that are supposed to be in your gut. It's not an exaggeration. There are supposed to be thousands.

There are somewhere between three and five pounds of bacteria in our gut in the average-size adult human. That is how much is there – just a tremendous amount.

So, root vegetables are the first thing on the list. What I tell all of our patients is: First, root vegetables. Then go to that magic librarian in the sky, and type in 'List of prebiotic foods'. Here comes the entire list, and you will see artichokes are there, bananas are there, and many of the foods that are common in people's diets are already there.

“Mrs. Patient, you have one root vegetable a day for you and your children and your entire family, and two of the others from the list of prebiotics. So, you are eating three prebiotics a day minimum. The more, the better, but a minimum of three per day. You alter them during the week, every week, and the result is that you are feeding many different families of probiotics – the good guys who are supposed to be there.”



Mouchet: So, a variety of foods will create a good variety of bacteria in the microbiome and maintain a healthy microbiome, right?

O'Bryan: That is correct. That is critically important to understand. The average American eats somewhere – and it depends on the study that you read – somewhere between 12 and 15 foods all week every week, and that is a variety. For some people, they only eat peanut butter and jelly sandwiches or something like that. Some kids are that way.

Our bodies are designed to thrive on a healthy variety. Although some of our wives may think that we are Cro-Magnons sometimes, just imagine what our ancestors would eat before agriculture. Agriculture is somewhere around 1-10% of the time that humans have been on the planet that humans have been farming. Before that, they were nomads. Just imagine what they would eat, and that is what our bodies are designed for – variety.

In the Chinese, there is an old saying, 'Eat with the seasons'. Whatever grows during the season, that is what you eat. For those who live in Northern climates where there is winter, it means many more tubers or root vegetables. It's hard to do that nowadays – to just limit yourself to what grows during that time of the year. We don't have to suffer that way because we have got lots of conveniences now. Nevertheless, the idea is variety.

It's hard to say that anything is more important than the variety to feed a healthy microbiome.



Mouchet: What could go wrong with the microbiome, and what are the biggest offenders? You already touched on antibiotics, which is the most obvious one, but there are many other ones. I don't want to overwhelm people with all those bad guys, but I think that it might be useful to talk about some of them.

O'Bryan: Sure, and that is a good question. Let me say here that it's great that this is the first interview in this entire series, which will go on for years, and you will have hundreds of interviews, but for all the interviews to come, I start many of my talks – and I teach quite a bit to physicians all over the world – with a slide. It's a picture of a display in the Museum of Science in Florence. It's a round marble stand with a glass dome on it, and inside is a display. It's Galileo's finger. Galileo bequeathed that all of his inventions could be on display for all of posterity, as long as they also displayed his finger, and there it is – Galileo's finger.

So, I like to hold one finger up. My recommendation to people – because there is so much information out there now, and you will be a little overwhelmed by some of the things that we say here, and it is difficult to remember it all – is if you hold one finger up for a minute, one hour a week, if you allocate every Tuesday night after dinner or every Sunday morning after church, it doesn't matter when, but one hour a week is the time you allocate to listen to these Wellness Reports or going back to one that you listened to in the past or taking one action step.



For example, if you read my books, you will understand the problems with plastic containers to store our food. Maybe that one hour a week is going to be a time when you order glass containers and get rid of the plastic. The plastic containers go out in the garage to store the nails or your children's toys, but not your food.

It may take an hour to go online and go to Amazon or go to www.MilesKimble.com and look for glass containers and see which ones you like and the shapes and the designs and all of that, and you order them. That is your one hour a week.

If you are kind, and you are patient with yourself, and not expecting that you are going to remember all of this right away, that way you don't get overwhelmed by the amount of information. You can say, "I'm not going to remember all of this, but I will come back to this interview. I will pick up another point here and there," then what happens six months down the road is you've got this done. You're on the road. You and your family are protected in ways that you didn't even know about six months ago.

The most important concept is: One hour a week. Be kind to yourself in this learning process. If you find that you are overwhelmed, then you've just spent too much time here. Come back here another time.

For some people, they can listen to an entire interview, and for some, it's a little too much, and they listen to 15 minutes and say, "That's enough. If I absorb that much information right now, that is going to be great. I think I'll turn off now while I'm still ahead of the game," and then you come back to it next week.



Now I've forgotten the question that you asked me because I thought that this topic was so important for people to understand – being kind to yourself and just allowing yourself the same time every week to study for you and your family. You are going to listen to these Wellness Reports. You can go back and listen to a new one – whatever it should be. Commit to one hour a week.

Mouchet: The question was: What can go wrong with the microbiome, and what are the biggest offenders? Gluten is certainly the biggest one, and there are a few other ones.

O'Bryan: What can go wrong is that what you put down there, “Mrs. Patient, your intestines are a tube. It starts at your mouth, and it goes down to the other end. The tube is about 20-25 feet long, and it winds around in the middle of your abdomen there. It's just a tube.”

If you think of a donut, if you could stretch a donut out, and it's one big, long donut, and you look down the center of the hole, that is your intestines. So, when you swallow food, it's inside the tube. It's not in the body yet. You've swallowed it, but it's not in the body; it's in the tube. And it has to go through the walls of the tube to get into the bloodstream, and then it goes everywhere – to your brain and your lungs and your kidneys – with all the nutrients to build new cells and keep you strong and healthy.

However, the tube itself, we used to think that it was just a passageway. We now know that it is so much more than that. That is where 70% of your immune system is. That is where the majority of the microbiome resides. What can go wrong?



Well, let me give you an example. When little kids come in – five-year-olds and eight-year-olds – I say, “Do you like Coca-Cola?”

They just smile and nod their head. I say, “I’ll tell you what. The next time that you come in, ask your mom to bring with you a can of Coca-Cola. Don’t open it; just bring it with you. We are going to taste it when you come in.”

So, they are all excited, and they want to come back to the doctor with their can of Coke. Then on their next visit I say, “There are two things that we are going to do. The first thing that we are going to do when we open the can is to pour a little into the glass, and you are going to drink some of it.” The kids smile. “The other thing that we are going to do is put a dime into the can of Coca-Cola, and we are going to leave it there.”

They look a little confused, but they say, “Okay.”

Then I say, “Now let’s put that Coca-Cola in your mouth, but don’t swallow it. If you can leave it in your mouth for five minutes, I’m going to give you \$5,” and their eyes pop out of their heads. So, they put the Coca-Cola in their mouth, and they are trying to hold it in their mouth. They’re all happy, and they are watching my watch. After about 30 seconds, you see this worried look grow on their face. After a minute or so, they are getting kind of strained. Within a couple of minutes, they can barely keep it in their mouth anymore.

I have a bucket in my office, and I say, “Spit it out if you want to,” and they just spit it out.



The reason we do that is because we have taste buds. What is the purpose of our taste buds? One of the purposes of our taste buds was to identify potential poisons. That is why we chew our food. Our ancestors were scavenging for food all the time, and they would choose something by sniffing it first, and then they would do a couple of chews of it. If it didn't offend their taste buds, they might chew some more, and then they would eat it.

One of the purposes of our taste buds was to protect us from poisons. Our ancestors had no protection from beverages because the only thing on the planet to drink was water. You don't see streams coming out of the mountains of orange juice or of Coca-Cola or of Mountain Dew. You don't see streams like that. There was nothing on the planet to drink but water.

Sometimes there was some fruit. There might be juicy fruits or things like that, but it was water. So, we don't currently have any protection from what we put in our mouth that might be a problem for us. And if you can't hold it in your mouth for a minute to two minutes – and that is not something that we recommend people usually do – without really wanting to spit it out; it's not good for you.

The other part of the Coca-Cola, we put a dime in a can of Coke. We would leave it there for 24 hours, and then you pour it out, and the lines are gone off of the round sides of the dime. The Coke ate metal. It eats the metal where the lines are gone. What do you think it does to your gut?



It's the most difficult thing at first to convince patients who have gut diseases such as Crohn's Disease or colitis, which is an 'itis' which is an inflammation of the intestines and the colon. Any 'itis' is just an inflammation (bursitis, arthritis, conjunctivitis, colitis). We always have to talk to people about what they are putting down the tube, and if it's causing more inflammation – causing the 'itis'.

So, when you eat foods that are not good for your microbiome, what happens? It destroys the microbiome. The good guys get destroyed, the bad guys are more resistant, but they are always in small amounts because the good bacteria is by far the dominant. The variety of the good bacteria – the probiotics – is the majority environment. But when you start wiping out the majority, then the minority – the bad guys who are kept suppressed by the good guys – now they start rearing their ugly heads up, and here come more, different diseases as a result of not having an adequate microbiome.

Here comes asthma, here comes eczema, here comes the entire world of atopic diseases in children. There are hundreds and hundreds of studies now – I'm not exaggerating – on the microbiome and asthma, the microbiome and allergies, the microbiome and skin problems. Just do a search, and you will see some of the studies.

So, what all of that means is that sometimes when people have asthma, it may be fueled by the lack of a healthy microbiome. You always want to address the microbiome just to make sure that you've got the majority of your immune system working there to protect you.



Mouchet: Can you talk a bit about inflammation? People are wondering, “Where does inflammation come from?”

O'Bryan: Sure. Every degenerative disease that I know of, except for one in the brain, every other degenerative disease is a disease of inflammation. The cells are on fire. It just depends: Is it a kidney cell or a brain cell? Is it gasoline or kerosene? But it's a fire. Diabetes, cardiovascular disease, Alzheimer's, Parkinson's, rheumatoid arthritis, Multiple Sclerosis, and Celiac disease are all diseases of inflammation.

The big picture overview and the goal for all of us is: Stop throwing gasoline on the fire! That is the first thing that we would want to do. Stop throwing gasoline on the fire. It sounds cute, but it really is what holistic and functional medicine is all about. It's all about: Stop throwing bad guys in there, and get the good guys in. So, you get the bad stuff out and get the good stuff in. That is basically how you heal from degenerative diseases.

I'm making it sound really simple, and it's not, but that is the basic premise that you have to work from.

Mouchet: Is there a connection between the bad bacteria and inflammation?

O'Bryan: There is a tremendous connection. Let's start with this one. Let's do a deep dive now. It was in 2010 that I saw the first study on this, and then I learned that there were some earlier studies. Now, eight or nine years later, it is much, much more prevalent, and it is commonly known in the world of Parkinson's.



In 2010, the study was pre-symptomatic Parkinson's. It caught my attention. I thought, "What the heck is pre-symptomatic Parkinson's?" The diagnosis is after the symptoms are already here. There is no blood test. There are no tests that say, "You have Parkinson's," until you have so much damage going on in your brain that now the brain can't function properly, and here comes the shaking of Parkinson's. Then you go to the doctor. It's mild at first, but it keeps getting worse and worse.

But what is pre-symptomatic Parkinson's? They talked about this, and what we now know is that there is a protein associated with Parkinson's called alpha-synuclein. The name doesn't matter, but it's a protein, and it gets twisted. The term is 'misfolded'. That misfolding of the alpha-synuclein protein occurs because of the imbalance in the microbiome. The protein gets misfolded in the gut.

When it gets misfolded, it goes right through the walls of the tube (your intestines) into the nerves inside the walls of the nerves. Then this misfolded protein creeps, neuron by neuron, up the nerves going back up into the spinal cord, and up the vagus nerve to the brain. This takes years of going up there. It gets up to the brain, and then there is a magnetic attraction for this misfolded alpha-synuclein protein to be attracted to the area of the brain that causes Parkinson's. That area of the brain is called the substantia nigra.

So, this misfolded protein goes there, and then all this inflammation occurs. You start damaging the tissue. You don't feel it when you are damming your brain tissue; you don't feel anything. This goes on for years and years and years until you damage so much tissue –



– usually it's 20-30 years later – and now you start getting some shaking. Then you get the diagnosis, as if you just got Parkinson's. But the mechanism has been going on for 20-30 years or more.

Some studies say that 90% of Parkinson's patients have constipation for years – for decades – beforehand. Constipation is often caused by an imbalance in the microbiome. So, you get more of these bad guys in the gut, and not enough of the good guys. There is not enough diversity. The inflammation in the gut can cause the misfolding of the protein. That misfolding goes right through the walls into the nerves, creeping up the nerves neuron by neuron. It goes all the way up the spine, getting into the brain, being attracted magnetically to the area of the brain called the substantia Nigra. Now the inflammation begins, your brain immune system – trying to protect you – starts going after this stuff. Here comes the autoimmune mechanism of Parkinson's. Your brain attacks these misfolded proteins, and the inflammation occurs, killing off tissue because of collateral damage. Eventually you've killed off so much tissue that here come the symptoms as if you just got it. And it all stems from a strong contributor which is an imbalance of the microbiome decades earlier.

Where did the imbalance of the microbiome come from? Well, it may have come from you having antibiotics as a kid because you had recurrent ear infections, and every dose of antibiotics alters your microbiome – sometimes permanently. The studies say that sometimes your gut never recovers from an antibiotic prescription. It never is the same again.



If you need the drugs, you take them, but the goal is always to do everything that we can so that you don't need the drugs, and not to be too free on prescribing them as if there are no real side effects to them. There are; it just takes a long time before the side effects manifest.

Mouchet: That is really, really good information.

Would you talk a little about gluten? You studied that a lot as well and the connection with autoimmune diseases.

O'Bryan: Of course. Perhaps I can give you a visual on this before we get specific to wheat. When a person comes in to see the doctor, and they have some symptoms, it really doesn't matter what the symptoms are; it's as if they have fallen over a waterfall, and they have crashed into the pond below. They swim up to the surface, they spit out the water, and say, "Thank God I'm alive!"

They are trying to stay afloat in this pond of diabetes or this pond of migraines or this pond of rheumatoid arthritis. It doesn't matter what the symptoms are. It's like you've fallen over a waterfall, and you are trying to stay afloat in the symptoms. The problem is that the water is really turbulent because it's still coming over the waterfall into the pond. You're still living the lifestyle that caused the disease in the first place.

We are all looking for the life jacket to keep us afloat, and it's really important to get a life jacket. You always want the most natural approaches possible with the least amount of side effects for your life jacket – your symptoms. But if you need the drugs, you take the drugs.



If you need them, you take them so that you can stay afloat, and so that you can stay okay in the pond of diabetes. Even so, you don't stay in the pond; you swim over to the side and get out of the water.

Walk up the hill, walk back up the river, and figure out 'what the heck' fell in the river that carried me downstream where I fell over the waterfall into the pond of Parkinson's or into the pond of diabetes or into the pond of recurrent miscarriages. It doesn't matter what the pond is; you have to go back upstream. The technical term is going upstream to figure out what happened here.

It's overwhelming when you start looking at all of this. You start reading about diabetes and the causes, and it's overwhelming. That is why you have to embrace one hour a week. It might take you a few months to really dial this down, but that is not how we have been trained. We have been trained with the magic pill. "Just get the magic prescription and everything is fine," and all the billions of dollars of marketing that we see on television and in the newsprint, people with these diseases.

Here are these guys who look like Adonis, and these women who are young, vibrant, beautiful women, and they are all happy and bouncing around while the announcer in the background is talking about this drug for diabetes. We just don't pay attention because they are playing volleyball, or they are running on the beach. However, in the background you hear, "Warning: This drug could cause high blood pressure, strokes, and this may kill you," and we don't pay attention to that voice because our eyes are seeing happy people, and we want happy. So, we listen to happy and say, "Oh, I have diabetes. I had better see about that drug," thinking that we are going to be okay.



If you need the life jacket, you take it, but get out of the water and figure out where all of this came from.

Now, to your question, I have five studies in my all-day course. We have an online course for people, and I present to doctors also, on the many dangers of wheat sensitivity. There are five studies in that program, and every human has a problem with wheat. This is why. “Mrs. Patient, proteins are like a pearl necklace. Hydrochloric acid, made by your stomach, undoes the clasp of the pearl necklace. Now you have a string of pearls.”

It's our digestive enzymes that are made by the pancreas, the liver, the gall- bladder, the microbiota. Our digestive enzymes then have to take that string of pearls (the pearl necklace) and clip them into smaller clumps of the pearl necklace – clip, clip, clip, clip – until they are broken down into each pearl of the pearl necklace, and this is the process of digestion. That is called an amino acid.

The pearls of the pearl necklace can go right through the walls of the tube (remember the long donut) because the inside of that tube is lined with cheesecloth, and only really small molecules can get through the cheesecloth to get into the body and into the bloodstream. So that is how digestion works. Snip, snip, snip, snip, snip from the pearl necklace down to smaller clumps of the pearl necklace, down to smaller clumps and smaller clumps, until we have each individual pearl. That is the process of digestion, and then we get absorption.

The problem with wheat is that no human has the scissors to snip wheat down to the individual amino acids. For every human, the best that we can do is clumps of the pearl necklace –



– called peptides – which trigger inflammation in the gut and tearing the cheesecloth.

What that means is that every time you eat wheat, you get a tear in your cheesecloth. What does that mean? “Mrs. Patient, we have an entirely new body every seven years. Every cell in your body regenerates. Some cells regenerate very quickly, like the inside lining of your gut every two to five days. That is the cheesecloth. Some cells are very slow, like your bone cells and your brain cells, but every cell regenerates.”

So, you eat toast for breakfast, and you tear the lining of the cheesecloth. The inflammation from it tears the lining of the cheesecloth within five minutes-you can see videos of this –within five minutes!

You have a sandwich for lunch, and you tear the lining of the cheesecloth. Then it heals. You have pasta for dinner, and you tear the lining of the cheesecloth, but it heals. A cookie tears the lining of the cheesecloth, and then it heals. You have croutons on your salad. It tears the lining of the cheesecloth, but it heals. Wheat that is in your vitamins or in your drugs tear the lining of the cheesecloth.

Again and again, day after week after month after year, until one day you don't heal anymore. When you don't heal anymore, the technical term is 'loss of oral tolerance'. When you don't heal anymore, now you start making antibodies to the peptides of wheat, and now you get the leaky gut, and the gut doesn't heal. Now you get the problems of wheat that can occur anywhere in your body. There are over 23,000 studies on wheat and brain function, wheat and cardiac function.



The Mayo Clinic is reversing congestive heart failure by putting patients on a wheat-free diet sometimes (not every time); from hospitals and clinics all over the world, reversing cognitive decline with wheat-free diets. 132 children with attention deficit disorder and Celiac disease and all 12 markers of attention deficit disorder were better within six months after being on a wheat-free diet. The markers were: They fail to pay attention, interrupts frequently, blurts out answers, and can't sit still, and in every child, every mark improved.

The author said, "We highly recommend that every child with attention deficit be checked to see if they have elevated antibodies to wheat." If they do, that may be a trigger contributing to the inflammation in their brain causing the dysfunction of their brain, diagnosed as attention deficit or as autism.

The way that wheat will manifest in an individual's body is determined by their genetics and how they've lived their life. The question of whether wheat will manifest as an inflammatory condition is: "Absolutely yes, it will". It just depends on when you lose oral tolerance. Is it at two years old, 22 years old, or 92 years old? It just depends on the individual. Most of us will develop a loss of oral tolerance, and wheat becomes a contributor that fell into the river, carrying you downstream, and took you over the waterfall and down into the pond of recurrent miscarriages.

I published a paper on Celiac disease and reproductive disorders in the *Journal of Gastroenterology* about six years ago, and there were 52 studies in that paper that I reference on how wheat may cause reproductive disorders, including miscarriages and premature births and low birth weights.



As I said, there are 23,000 studies on this. It's not a question of 'if' wheat is going to cause a problem for you; it's a question of 'where' wheat is going to cause a problem for you. That is determined by your genetics and how you have lived your life.

For example, if you eat a lot of tuna, you have mercury problems in your body most likely because all tuna has mercury now. So, if you have high mercury in your brain, that is a weak link in your chain. If you pull on the chain, it breaks at the weakest link. Is the link your brain, your heart, your liver, or your kidneys? Wherever your weak link is, inflammation is the pull on the chain.

Obviously, the first thing that every doctor should be teaching their patient is: Stop pulling on the chain so hard. Figure out how you fell in the river that carried you downstream over the waterfall into the pond of what the symptoms are that you are presenting with.

Mouchet: What are some of the other signs that the microbiome can be out of balance so that we don't let it develop all the way to a real disease?

O'Bryan: That is an excellent question. Some of the signs that you are asking for, some of the obvious ones are any GI complaints and any gut complaints: bloating, gas, burping, belching, heartburn, constipation, diarrhea, poor bowel movements like stringy bowel movements or rabbit pebbles or something. Any time your gut is not working right, you can be assured that there is an imbalance in your microbiome. You can be assured of that.



For most people, you won't have gut symptoms. For example, with wheat sensitivity, the ratio of gut symptoms is 1:8. For every one person who has symptoms in their gut from a problem with wheat, there are eight who have no gut symptoms; they have brain symptoms or kidney symptoms or joint symptoms or skin symptoms, but not gut. So, for those doctors and for those people who are looking for gut symptoms as an indicator that a food you are eating may be a problem for you, you will catch one of eight, and you will miss seven out of eight.

The symptoms are any time you don't feel good – no matter what the symptoms are – if you want to check this out, just go to Google and type in 'thyroid and microbiome' or 'Hashimoto's', which is an autoimmune disease of the thyroid and the microbiome, and look at all the studies that pop up. Or look at 'gallbladder and microbiome' or 'kidney disease and microbiome' or 'Alzheimer's and microbiome'. There are hundreds and hundreds of studies on this now.

Researchers have been shocked by what they have discovered in the last 15 years. We didn't know this 15 years ago.

Mouchet: What is the best way to take care of the microbiome? You talked about the root vegetables, which are prebiotics. Is it also important to take some probiotic supplements or some fermented food? What is your recommendation?



O'Bryan: That is another good question. Our recommendations to people, of course, on the prebiotics that we talked about earlier, and, “Mrs. Patient, I want you to go to a local natural food store, or a health-food store, or a Whole Foods, or Thrive Market online. These are great places to buy your natural foods.”

Thrive Market is doing such a great job of supporting poor people with profits. They are very socially-minded, and there is a lot of information that you can get at my website at www.theDR.com/ThriveMarket and you can learn all about that. But go to a store or Thrive Market and get five different types of fermented vegetables. Get sauerkraut, get different flavors of kimchi, get miso (fermented soy), and get fermented beets. There are so many types out there now. You keep them in the refrigerator. Just don't get pasteurized because pasteurization kills bacteria.

“Mrs. Patient, every day I want you to have a forkful of a fermented vegetable. It doesn't matter which one because every day you are going to rotate it; just one forkful every day.”

“Why can't I have two forkfuls?”

“You can have two. Have two! I'm really happy if you get one, but if you want more, take more.”

Fermented vegetables are good because the fermentation process produces hundreds of families of bacteria, and that is what fermentation is. Bacteria are developing in there. It's good bacteria. It's the kind of bacteria that you want to give to feed your microbiome.



Every day, you have one root vegetable, two other prebiotics from the list that you will pull off of Google, and one forkful of fermented vegetables. That way, you are feeding your microbiome.

Supplements can be very helpful for you. There is quite a bit of controversy as to the benefits long-term, but they often help in the short-term. So, supplements are good, but supplements are only good so long as you are also working with your food selections. That is the most important one, and that is the one that you keep for a lifetime. Develop the habit of eating foods that feed your healthy microbiome. That is the first thing.

The food selections are just a given. That is the way that our ancestors ate all of the time. They would eat root vegetables and prebiotics all the time.

Supplements of probiotics are a shotgun approach unless you know what you're doing. I mean, it's okay. It's not dangerous at all. It can be helpful, but we always recommend that our patients test their microbiome. Have your doctor test your microbiome so that you know exactly what it is that you are dealing with.

It's a simple stool analysis, and there are a number of labs that do this now. There is a cutting-edge laboratory called Viome. No one else does the advanced technology that they do, but there are many good labs out there. We encourage our people to read about Viome at www.theDR.com/Viome. You can learn more there.



It's always best to know what you are dealing with. So, go to your doctor and say, "I would like to have my microbiome tested."

If he tilts his head funny and doesn't know what you are talking about, you know that you need to have another doctor as part of your healthcare team who really does know about this because that doctor doesn't.

You might want to consider developing a healthcare team which includes your traditional doctor – because you need him in times of emergencies; that is what they are for. You might want a more holistic doctor who is helping you go back upstream to figure out 'what the heck' is going on here, and that is the world of functional medicine.

I am on the faculty of functional medicine, and we teach doctors all over the world how to ask the questions and how to think differently. I tell them the same thing, "One hour a week. It's going to take you a while to reframe how you think about health. If you give yourself one hour a week to learn a little more, you will get there. Six months or a year from now, you will really have this down, and you will be grateful that this is just part of how you practice now."

For moms, it's how you live your life for you and your kids, and you are successful at implementing by allocating one hour a week.

To your question, it is always best to be tested. The safe things that you can do are root vegetables, fermented vegetables, and probiotic supplements are okay. It's a billion-dollar industry, and some people will be all over me because I'm putting it as second-tier and not the most important thing to do, but it can help.



There is no question that it can help, but you really want to build a healthy microbiome on your own. Taking the probiotic supplements will not build your microbiome long-term. The ones that you take don't live that long, but they definitely can help.

Mouchet: You have a new book out called *You Can Fix Your Brain*. That seems really intriguing. Can you tell us a little about that?

O'Bryan: Of course. Our audience will understand the subtitle very well I hope. The title of the book is *You Can Fix Your Brain: One Hour a Week to the Best Memory, Productivity, and Sleep You've Ever Had*. Now I hope that our listeners understand that the one hour a week is what we have been talking about. With patience and persistence, you can do it because you're going to be overwhelmed. My book is overwhelming with all the studies that are out there about what contributes to our brain deterioration.

For example, as of yesterday there are 218 studies directly associating herpes virus infections and Alzheimer's. So, if you get the cold sores on your lip every once in a while, that means that you have got a herpes outbreak, and you are at risk of having elevated antibodies – because your immune system is fighting this virus to try to keep it in check. Those antibodies can get into your brain, and it is a catalyst for the development of the beta-amyloid plaque that eventually accumulates and gets the diagnosis of Alzheimer's.

So why is that? We've heard about this thing 'beta-amyloid'. It's the 'garbage' or the exhaust in the brain that makes the nerves not be able to talk to each other anymore.



That is what Alzheimer's is. It is the accumulation of beta-amyloid plaque.

Many of us – and the entire industry until just six or seven years ago – thought that beta-amyloid is a bad guy, and you don't want that stuff. Well, it turns out now that they have done autopsies on many, many people who passed from Alzheimer's, and they look at the beta-amyloid plaque, now that we have the technology, what they identify is it is loaded with antibodies to bacteria and to viruses, antibodies to IgM and antibodies to herpes. It is loaded with antibodies to *Klebsiella pneumonia* and loaded with antibodies to *clostridium*. You see that the beta-amyloid is an antibacterial antiviral trying to protect you from some threatening agent that got into the brain.

Beta-amyloid gets activated when you've got invaders in the brain and the brain's primary immune system can't take care of it. The back-up, if you will, is beta-amyloid. So, beta-amyloid is trying to kill this stuff. That is not a problem, except that there is a term that I coined in the book called B-4, which stands for a breach of the blood-brain barrier. If you've got a breach of the blood-brain barrier, we all know about leaky gut, this is leaky brain. If you've got a leaky brain, these bacteria and these viruses get right through into the brain, and your activated immune system can't take care of it all, so the back-up that comes in is beta-amyloid.

So, it's not a problem to activate it to protect you; the problem is day after week after month after year. More and more of this stuff infiltrates, and more beta-amyloid is produced, and there is more scarring or exhaust and the plaque, and this goes on for days and weeks and months and years and years and years.



In the mid-1990s they found that every dog that they did an autopsy on in Mexico City had evidence of Alzheimer's. In the mid-2000s until 2010, the urine tests and the blood tests came out so that they could start checking every child in Mexico City. Every child who is checked has inflammation markers in their brain, which is the mechanism of Alzheimer's. Every single child in Mexico City had the markers. Why? It's the air pollution.

We know that there are three main types of Alzheimer's now, and the primary one that is over 60% clinically identified is inhalation Alzheimer's; it's what you are breathing. People don't know that what they are breathing may be triggering the Alzheimer's that they are getting. They just don't know, but it may be the problem.

"Mrs. Patient, when you go on vacation and you are gone for a week or two, and you come home, do you have to open the windows to air the house out?"

"Yes. It's a little stale."

"You've got mold, and you are breathing mold every day. You need to do a mold test. You need to do a urine test to see if you have mold exhaust in your bloodstream or in your urine. If you have exhaust, you can be assured it is going to your brain, and your immune system that is trying to protect you is fighting this stuff, causing the inflammation in your brain, and killing off brain cells that eventually get diagnosed as Alzheimer's."



I mean, this is a wake-up call for people. You read my book, *You Can Fix Your Brain: One Hour a Week to the Best Memory, Productivity, and Sleep You've Ever Had*, you are going to change how you take care of your brain. It's going to make perfect sense to you. All these analogies that I talk about are in the book.

You will read this and you will say, "Oh my God! I had no idea!"

All the studies are there. There are hundreds of studies that I have referenced in this book – literally – and there are 36 URL's that we give you to go to learn more about different topics. This is a hands-on book to rebuild your brain because you can fix your brain. You just have to know how to get out of the pond, get out of that pool, get out of the water, walk upstream, walk back upriver, and figure out 'what the heck' fell in the water that carried me downstream that I fell over into the pond of brain dysfunction.

That's why when we began I said that it doesn't matter which disease you've got; it's how you treat this thing that makes the difference.

Mouchet: Thank you. Is there one little example that you can give in terms of things that people can do?

O'Bryan: Yes, I will give you two. The first one is that we all pump gas. You have to fill your gas tank up sometimes. Sometimes when you're standing there waiting for the gas tank to fill up, can you smell the gas?

Mouchet: Yes.



O'Bryan: Of course! You're smelling benzene. Benzene is a neurotoxin that goes right through your lungs, into your bloodstream, straight up to your brain, and causes inflammation of the brain – every time without exception.

“Well, I have to pump gas.”

Yes, you do, but you're standing downwind. Walk around to the other side of the hose. Now you're standing upwind. You don't smell it anymore.

We just have to think about these things.

Here is another one. You go to the coffee shop every day on your way to work, and you get a coffee to go, and you're drinking it on the way to work and all that. That is fine. What you don't know is that plastic lid is loaded with a chemical called bisphenol A. For those that say they are 'BPA-free' they have BPS, which is another advanced chemical that is worse.

So, the lids have this chemical, BPA. The heat from the coffee, the steam comes up to the underside of the lid, condenses, and drops back down into the coffee, full of bisphenol A – because it's a very water-soluble chemical.

You put the coffee cup up to your lips, the hot liquid hits the underside of the lid, tapers down into the opening full of bisphenol A, and now you've got bisphenol A in your bloodstream.



Bisphenol A binds onto your hormone receptor sites throughout your body, including your testicles, your ovaries, your breasts, your uterus, and your brain. Bisphenol A in the brain prohibits the production of the coating on the brain – the Saran Wrap of the brain, called myelin – and it inhibits the myelin protection in the area of the brain called the hypothalamus. That is your memory center.

So, every time you drink coffee with plastic lids, or if you grab the credit card receipt at the restaurant, those slips are loaded with bisphenol A. Now it's on your hand, and it's in your bloodstream in three minutes.

Just read the studies. I never pick up those slips anymore. I just take a picture of it with my smartphone, and I keep the record that way. I don't touch those things anymore after I read the studies. I learned.

So, what do you do? You have to get your coffee. You buy four stainless steel containers. You go to Amazon and buy four Contour stainless steel containers. You drive to the coffee shop, bring in your container, and say, "Fill it up, please," and that is what you drink from.

Then you go home at night, bring it into the house, wash it in the kitchen sink, and it's drying on the dish rack upside down. You go to work the next morning, and you've forgotten your Contour cup. So, what do you do? Then you're back to being exposed to bisphenol A again. That is why you buy four, and you keep them in a bag in the back seat of the car.

Why in a bag? Because if you just put them in the back seat, every time you turn a corner, they are going to clink into each other, and it is an annoyance.



So, you learn after a while to put them in a bag. Then when you have four of them sitting on the drying rack by the kitchen sink, then you put them in a new bag, and you put them by your shoes at the door so that you don't forget them in the morning when you go to work.

We have to learn these little tidbits. We have to learn that the way we are living our lives is causing the diseases we are getting. It's overwhelming when you start learning this stuff. The plastic wrap that you wrap around your food and the plastic containers that you keep your food in leaches bisphenol A and BPS into the food. You can't use those things anymore.

“We've always used that.”

Well, look at how Alzheimer's is rising.

Some people say, “I've always been inflamed.”

Of course. We have to realize that it's the conveniences of our life, and 250 pounds of toxic chemicals per person per day that we are being exposed to is creating all the inflammation, pulling on the chain, and manifesting wherever the weak link in our chain is – your heart, your brain, your liver, your kidney – and wheat is a primary one in the foods. There are others, but that is a primary one.

My first book, *The Autoimmune Fix*, was about wheat and the foods. This book, *You Can Fix Your Brain*, is about the environmental toxins. I recommend one hour a week because it's so darn overwhelming. You can't get this all at once.



If you are patient and you are kind, six months from now you look back and smile, and now you're telling your friends about this stuff. Some of them think you're a nutcase for what you are doing, but others will listen because you are feeling better, and you have arrested your hypothyroid disease or your blood pressure has dropped ten points, and your doctor is weaning you down on your medication because you don't need as much medication anymore. Or your brain is working better than it has worked in four or five years, or whatever pond you fell into, you start getting better.

That is the way that you do it. You have to go back upstream for all of this.

Mouchet: You talk about examples of people who are recovered. So, is it possible to get out of the pond?

O'Bryan: Oh my goodness, yes! You can reverse rheumatoid, or MS. My wife and I traveled throughout the world. We went to seven countries, and we interviewed the world leaders in autoimmune diseases. These are the real leaders – the guys whose studies I'd read. We went to Oxford, England. We went to Israel. We went to Germany. We went to Portugal and Brazil, and we interviewed these world leaders.

Then I interviewed the doctors and the clinicians who are functional medical specialists going upstream and using the principles of what these researchers had identified in their practices that they were using as principles, and then I interviewed the patients of these doctors who reversed their MS and reverse their rheumatoid and reversed their psoriasis.



When you hear this lovely 43-year-old woman in London say, “I took the tube to come here today, and the tube station is seven blocks from here at this hotel where you are interviewing me. I walked the seven blocks, and it wasn’t a big deal.”

But then she got teary-eyed, and she said, “But it is.” Then you see the pictures of her two years ago in a wheelchair. She couldn’t walk with MS, and her MRI showed eight lesions in the brain. Then you see her today just buoyant and vibrant, and you see her MRI showing two lesions left, and she has no symptoms whatsoever.

You see this time and time again. The documentary is called *Betrayal: The Autoimmune Disease Solution They’re Not Telling You*. It’s at www.theDr.com/Betrayal, and it’s free. You watch this, and your jaw drops. It gives you hope.

My wife and my goal was to give you hope and to empower you to understand that when you go upstream, you can arrest the development of autoimmune diseases irrespective of what it is. You can arrest the development of your cancers.

I’m not saying that you are going to cure cancer, but you can arrest and slow down the progression, and sometimes reverse it, and sometimes get rid of it completely. There are hundreds of testimonials on this and cases like this, but it doesn’t happen magically with a pill. It will never happen with a pill.



Two pharmaceutical companies that I know of have closed their Alzheimer's research departments in the last two years and laid off all the scientists. They completely closed them down because they spent billions of dollars, and they finally get it. There is never going to be a pill for Alzheimer's. Never. There are 36 different things that you have to fix.

My good friend, Dr. Bredesen wrote a book that came out last year, *The End of Alzheimer's*. He is from UCLA and runs the Buck Institute there, and he shows you that it takes 36 different things to arrest Alzheimer's. Do you have gluten sensitivity? Get it out of there. Do you have a dairy sensitivity? Get it out of there. Do you sleep eight hours a night? Teach them how to sleep. Do they walk every day? Go over walking and exercise. Do they have elevated homocysteine? Get it down. Do they have insulin resistance? Fix it.

You just have to go upstream and figure out what fell in the river that carried you downstream and into the pond of Alzheimer's or rheumatoid or MS. I can't tell you how important the way that we look at our health is.

What every one of us has to do is learn to walk around to the other side of the hose, or get your Contour coffee mugs, or get glass containers to store your food in the refrigerator. All those little things make a difference, and we have to get out of the mindset there is a pill and that we can keep living the lifestyles we are living, creating all the problems, "But I'm going to take a pill, and I am going to be fine."

It doesn't work that way.



Mouchet: I think that the message is very clear that we need to take our health into our own hands and learn. Then we can reinvent the way that we live so that it is more natural and in harmony with our body.

O'Bryan: That is so true. I'm just sitting here smiling, thinking, "This is the interview to launch your new series – your new broadcast."

I am so happy that we set the standard here so that this is how people are going to think now with all the future interviews that are coming. Every one of the interviews will be one of the things that fall in the river is... and then they are going to talk about that thing that they are a specialist in.

It might be heavy-metal toxicity or whatever it is going to be, but I am so grateful and honored that you invited me to do the inaugural here because we are setting a context. You are going to get well. You want to get well? Read my books so that you dial this down, and then you know the questions to ask of every healthcare practitioner whom you work with.

I'll just say once again thank you so much for the opportunity to work with you here today.

Mouchet: Thank you for sharing your passion and all of this valuable information with us. There is definitely a lot to digest here.

O'Bryan: Yes there is, and there are some resources that we have for you also.



Mouchet: Absolutely. We will put them all up on the Wellness Series page on Solari.Com.

One last question: Where can people find your book? Is it on your website?

O'Bryan: Go to www.theDr.com/books. They are both right there.

Mouchet: Great! Thank you very much and have a great rest of the day.

O'Bryan: Thank you so much and you, too.

Mouchet: This was the first episode of The Solari Report Wellness Series. You can leave your comments or questions on the blog. I will make sure that I will get answers from Dr. Tom if you have any questions for him.

Also, please feel free to make suggestions about future topics for this series. This is Brigitte Mouchet with The Solari Report Wellness Series. Thank you for listening and take good care of yourself because it's more fun to be well.



MODIFICATION

Transcripts are not always verbatim. Modifications are sometimes made to improve clarity, usefulness and readability, while staying true to the original intent.

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