Transcript: #491 Super Gut: Why Restoring Lost Microbes Transforms Health with Dr. William Davis

Dr. Wendy Myers: Hello everyone. I'm Dr. Wendy Myers. Welcome to the Myers Detox Podcast. So today we've got a great show. We have Dr. William Davis, he's the author of Wheat Belly, and he has a new book out called Super Gut, and I just love him so much. He has such great energy, he is so knowledgeable, and he is just very excited about educating people about their health. And he's helped millions of people with his work.

And today, we're going to be talking about his book, Super Gut, and how restoring lost microbes can transform your health. And we'll talk about what has damaged our gut microbiome and what we can do to restore it. And very simple ways, a very simple yogurt recipe that you can use to restore your gut and what exactly is going on.

We talk about SIBO, small intestinal bowel overgrowth, and why so many people have this, to 50% of Americans have this, and why a lot of the things that conventional medical doctors are doing just aren't working to restore your gut, restore gut function. You get on medications that really don't work very well. So it's really about getting rid of gut bugs where they're not supposed to be. And we talk about all the different ways to diagnose SIBO and what to do to correct your gut function.

So I know you guys listening to this show, you're concerned about toxins; you're concerned about your body's burden of toxins. And so, I created a really simple quiz at heavymetalsquiz.com that you can take. And after that, you get your results, whether you have a low, medium, or high body burden of toxins based on some lifestyle questions. And then, after that, you also get a free video series that answers a lot of your burning questions about detox, how to go about it,

where to start, et cetera. And so, a really good video series that I created for you guys. So go check that out at heavymetalsquiz.com.

So Dr. William Davis is a cardiologist and a New York Times number one bestselling author of his book, Wheat Belly. And he's also the author of the new book Super Gut. He is the medical director and founder of the Undoctored program, including the Undoctored Inner Circle, and he's the chief medical officer and co-founder of Realize Therapeutics Corporation, which is developing innovative solutions for the disrupted human microbiome.

You can learn more about Dr. Davis at drdavisinfinitehealth.com. Dr. William Davis, thanks so much for coming on the show.

Dr. William Davis: Thank you, Wendy. Thanks for the invitation.

Dr. Wendy Myers: Yes. So you talk a lot about the human microbiome. And so, what's going on with the human microbiome, and how it's contributing to people's health?

Dr. William Davis: Wendy, for the longest time, I think most of us in conventional healthcare regard the gastrointestinal microbiome, that is, the trillions of creatures living in our gastrointestinal tracts, as nothing more than a curiosity, a nuisance, this thing responsible for a couple of weeks of diarrhea after taking a course of antibiotics. And, of course, you tell your doctor, "I've got diarrhea." And he says, "Well, you'll live through it. You'll get through it." Right? And that is the furthest thing from the truth.

In fact, that course of antibiotics was devastating. It's like dropping an atomic bomb and thinking that the world would recover afterward. It does not. And so that combined with numerous other modern factors that are common in modern life like glyphosate, the herbicide that is the active ingredient in Roundup, is not just an herbicide; it's also an antibiotic.

Preservatives in food. You keep, say, mold from growing your food, but it also has antimicrobial properties in you when you ingest it. Emulsifying agents, like polysorbate 80 in ice cream, massively just destroy your microbiome. The list is long when, as with other drugs, some acid-blocking drugs, non-steroidal anti-inflammatory drugs, statin cholesterol drugs, birth control pills, chlorinated drinking water, and on and on and on.

So as a society, we have dramatically disrupted the composition of species in the GI tract. But the thing that really is leading to actually having this whole thing come to a head is when you lose hundreds of healthy species, unhealthy species proliferate. But to my great surprise, because I was very skeptical about this until a few years ago. When you lose those healthy species that were suppressing unhealthy species, the unhealthy species proliferate, but then they do something extraordinary.

They climb up 24 feet of the small intestine. And so you end up with a total of 30 feet, 24 feet of the small intestine, four to five feet of bowel large of the colon, 30 feet of trillions of microbes. Now, the small bowel, the small intestine, is not equipped to handle this. The colon has a thick two-layer mucus barrier. The small intestine has a thin, single-layer mucus barrier. So when you get fecal microbes like E.coli, salmonella, and campylobacter, these names are often familiar to people because they're also the species of food poisoning.

So when these fecal/food poisoning species get into the small intestine, they only live for a few hours, so there is rapid turnover. When they die, they release some of their components, specifically one called endotoxin, and endotoxin thereby penetrates that thin single-layer mucus barrier in the small intestine and gets into your bloodstream. And that very important finding was finally validated in 2007 by the European group and has since been corroborated numerous times. That process of endotoxemia, endotoxin in the bloodstream.

Now makes it crystal clear how the microbiome in the GI tract can raise blood sugar and cause diabetes, can contribute to obesity and failure to lose weight or to skin conditions like rosacea or psoriasis, or to brain conditions like depression, cognitive impairment, Lou Gehrig's disease, to muscle and joint problems like fibromyalgia, rheumatoid arthritis.

In other words, virtually all human disease has to be reconsidered in light of the contribution of the GI microbiome via endotoxemia. And this is very common.

Dr. Wendy Myers: Yeah. What's interesting, I've been reading different things about how different bacteria in our gut can leave and populate our joints, populate different organs, and then our immune system will go and try to attack those. And then the organs and organs kind of get the fallout from our joints. Rheumatoid arthritis can be caused by bacteria. The body's just trying to attack and cause all this inflammation in the joints, et cetera. Can you talk about that?

Dr. William Davis: Yeah. That's even a newer collection of findings that emerged over the last few years. The whole issue of so-called translocation, where bacteria can exit some original spot, let's say the colon, and then find access in the mouth, in the thyroid, in the skin, in the brain.

So one very good example is this microbe called fusobacterium, fusobacterium nucleatum. It's in the mouth. People normally have it, and it just minds its own business. But if you have conditions like gingivitis, bleeding gums, or periodontitis, fusobacterium proliferates, and interestingly it gets into the bloodstream and then colonizes the colon.

You would think logically, right? Fusobacterium in the mouth is swallowed and thereby colonizes the colon. But no, it gets into the bloodstream. This has been done with good science and then colonized the colon, where it causes colon

cancer. The evidence is very good. In other words, maybe not all, but many cases of colon cancer are initiated by the oral microbiome.

So this, you can imagine, Wendy, this is turning a lot of thinking about disease topsy-turvy. In other words, what do gastroenterologists do for colon cancer? They tell you, "Eat fiber." Meaning brand fiber, which is, by the way, wrong; that's a misinterpretation. And two, schedule you for a colonoscopy. That's how they make money. And if they see polyps or precancerous lesions, they try to take them out. That's not colon cancer prevention. That's early detection.

What if we were to say colon cancer prevention begins with attention to the oral microbiome? Wouldn't that be a whole new leap ahead and insight and effectiveness? That's just one episode of translocation; but there's also good translocation. One of my favorite examples is a third of the female population in the world. This is not talked about much, but it's a very important issue because it has implications for such things as miscarriage and premature delivery. So a third of the world's female population has vaginal dysbiosis, disruption of the microbiome of the vagina.

Typically, the vaginal microbiome is much more predictable and contained compared to the much larger gastrointestinal microbiome. And the vaginal microbiome is meant to be dominated by a species lactobacillus crispatus and meant to not have unhealthy species. A bunch of them have these names, Atopobium, Gardnerella vaginalis, and fecal microbes. Well, a third of the world's female population has the opposite. Unhealthy microbes dominate unhealthy microbes, lacking or completely absent. And that encourages miscarriage and premature delivery.

As you know, if you deliver a child, say 31 weeks, that child's life has changed forever for a lifetime. It has impaired neurological maturation, psychological maturation, and immunological maturation. So anything we can do to stop that. And one of the things that leads to premature labor is vaginal dysbiosis, presumptively, because when you have inflammation of the cervix, the vagina cervix, it causes the cervix to relax prematurely, and you can deliver a child early.

Well, if a woman has vaginal dysbiosis and she takes lactobacillus crispatus as an oral probiotic, it will populate her vagina. Now, how? There's no connection between the gastrointestinal tract and the vagina. There's contiguity, nearness in the perineum, the groin area. They're near each other, but there's no actual connection. And even more remarkably, this is evidence from Loyola in Chicago.

A woman takes crispatus orally; it populates the vagina, then it populates the bladder, the urinary bladder. Whereas women age, they have more and more problems with urinary complaints. They cough or laugh, and they pee. Right? Origin continence, or they have repeated urinary tract infections. A major problem for ladies. Well, get crispatus orally. It colonized the bladder. And so far, the evidence tells us that it reduces repeating urinary tract infections by about

50%. So not 100%, but 50% is a big dent. Right? And that's another example of many translocations in a good way.

So there are all kinds of variations on this, but it's become clear. We are walking microbe factories; we've got microbes just about everywhere. Good ones get where they don't belong, good ones where they do belong, and bad ones to translocate to other places. It's really this community of microbes in constant flux.

Dr. Wendy Myers: And so can you talk about, go through those steps of how someone develops a leaky gut and what is happening when people eat food? Do they get these large undigested proteins that leak into the bloodstream and that whole problem there with food sensitivities and chemical sensitivity and things like that?

Dr. William Davis: Well, there are a number of ways to get there. But the two biggest ways in my old bugaboo are wheat and grain consumption. The gliadin protein of wheat and related proteins of other grains, secale of rye, Hordeum of barley, and zinc of corn have the unique capacity to open up intestinal barriers. That is not my speculation. Good science at places like the University of Maryland, Hopkins, and other places, Harvard.

So consumption of foods that contain gliadin protein, wheat, and grains opens up the intestinal barriers to both bacterial and food breakdown products. And as you point out, it fools your immune system because they respond to those foreign proteins, but they may resemble some human proteins. And if that foreign protein from a microbe, for instance, looks like your thyroid, you're going to attack your thyroid. Hashimoto's thyroiditis. Or if it looks like some of the tissue in the synovium of your joints, the lubricating capsule of your joints, it's going to attack your joints.

So wheat and grain elimination, despite being the darling of all dietary guidelines, is a major trigger for autoimmune intestinal permeability and autoimmune disease and inflammation. Another way is what we talked about earlier. When you lose healthy microbes, you lose their suppressive effect on unhealthy microbes, and when those unhealthy microbes get up to the small bowel in particular, so they not only allow the endotoxin to penetrate into the bloodstream but it also allows fecal microbes to actually directly contact intestinal cells, which is very inflammatory.

You can get colitis or intestinal inflammation, and that also increases intestinal permeability. And so it, now, by the way, consumption of wheat and grains and SIBO and endotoxin is a lethal combination, but it's exceptionally common. The sad thing is most of my colleagues have not caught up with science. They're too busy talking to the sexy sales rep in a miniskirt and not reading the science, not recognizing that type two diabetes, Lou Gehrig's disease, Parkinson's disease, cognitive impairment, Alzheimer's, Hashimoto's thyroiditis, also Crohn's disease,

on and on and on are diseases largely of, as you point out increased intestinal permeability.

And the solution is not some biological drug for $4,000 a month to block one step way down the pathway, but to actually get to the root cause. Disruption of the microbial composition of your gastrointestinal tract and increase intestinal permeability. And Wendy, it's actually quite easy. It sounds complicated. It is a kind of redefinition of so many health phenomena, but if you get it, you have enormous control over your health.

Dr. Wendy Myers: And I love that you've talked so much about this. And in your work, you have a book called Wheat Belly, which is an international sensation. It's just, you've sold so many copies, and it's helped so many people. Like my mom, I even introduced her to your work, and she stopped eating wheat finally, which I've been telling her for years. She was constantly clearing her throat every few minutes, and it just stopped.

It stopped after she stopped eating wheat, and she was having lots of allergies and mucus and constantly clearing her throat. She couldn't even hold a conversation without constantly clearing, and it just disappeared. It just stopped. Yeah, that's great. It's just a game-changer for her. It's so easy to think she had some medical condition that was going undiagnosed, but it's not the case.

Dr. William Davis: What typically happens with someone like your mom? As they say, "Hey, you likely have acid reflux. And acid reflux is causing acid in the back of your throat, making you cough. Let's put you on a stomach acid-blocking drug." And that, of course, has its own huge collection of problems.

So, in other words, the conventional solutions are not solutions at all. And in fact, cause a whole domino effect of health problems, including SIBO, by the way.

Dr. Wendy Myers: Yeah, yeah. Well, let's talk about SIBO because SIBO, I think it's a huge, huge problem that goes largely undiagnosed and causes massive digestive issues. What is going on there, and what is it?

Dr. William Davis: So that's a situation where you lose healthy microbes and fecal microbes have proliferated, then ascend into the 24 feet of small intestines. So small intestinal bacterial overgrowth. When it's everywhere, it is, in my estimation, the worst epidemic ever in the history of our species on this planet. Because that evidence is already out there.

So if, for instance, you looked at the, there are studies like this, in people with irritable bowel syndrome, let's say, what proportion have SIBO? Well, that's been done. We know that 60 to 70 million Americans have had IBS, irritable bowel syndrome. And while methods differ in some of the values, roughly 40%

of people with IBS and irritable bowel syndrome have SIBO. Well, 40% of 60 to 70 million, that's about 24 million there already. How about people with fatty liver? Half the American population, shockingly, now has fatty liver on their way to cirrhosis at some point in their lives.

Well, half the population's 160 million people. And with good evidence, we know that 50% test positive for SIBO. Add another 80 million people to the list, add neurodegenerative disorders, autoimmune diseases, type two diabetes, heart disease, restless leg syndrome, and on and on and on. Fibromyalgia. And you easily, easily, now there's some overlap, obese type two diabetics with fatty liver, for instance.

But you can see we're not talking about something that's rare or uncommon. We're talking about something that likely affects 50% of the US population. You know what? At first, I thought, "No way. No way." Until this little thing came out. The air device. So you may know about this. You blow into it, and it talks to your smartphone on a scale of zero to 10, registering how much hydrogen gas you're producing.

Now, the way to use this properly is to use it after the consumption of something that microbes consume to make hydrogen gas. So you can time how soon hydrogen gas is produced. Because if you take something, let's say inulin powder, in your coffee, it takes a minimum of 90 minutes to get to the colon, where the production of hydrogen gas is normal. But if it happens, say at 45 minutes, microbes living way up high. So this device has changed everything. It shows us that SIBO is everywhere.

Dr. Wendy Myers: Yeah, I agree. I think SIBO is a huge, huge, huge, huge problem. It's just so easy to develop this issue with our modern lifestyles and our diet and the antibiotics and the natural antibiotics even people are taking, and just the constant ingestion of glyphosate that's in our diet as well. It's just destroying our microbiome, and there's just the wrong bacteria in the wrong places. So this device you have, what is it called? And where do you get it?

Dr. William Davis: So it's called the AIRE device, A-I-R-E. This is the original that only tests for hydrogen gas. There's a newer one that's black colored, and it tests for hydrogen gas and methane. Methane's important for people who struggle with constipation. So if you don't have constipation, there's not a whole lot of reason to get the new one. The old one is just fine.

You can get this on Amazon, or you can get it from a company called foodmarble.com. And by the way, I have no relationship with the company. I do know the inventor, Dr. Aonghus Shortt, he's a Ph.D. engineer, and he didn't fully understand what it is he created some years ago. He thought it was a device for his fiance, then wife, who had irritable bowel syndrome and was told to go on a low FODMAPs diet, low fiber, low sugar diet. And he saw her get tripped up with

gas and bloating and diarrhea. So he invents this to detect hydrogen gas that results when you trip up and get some FODMAP-containing foods.

Well, he releases it. I get a hold of it, and I call him up. I said, "Aonghus, that's not what this is." So I'm telling the inventor what he invented. So I said, he's a Ph.D. engineer; he's not a doctor of medicine. So I thought, "No, this is a mapping device. It maps out where microbes are" Ah! So I tell everybody that because if you take the instructions as they are right now when you buy them, they're not complete.

So I wrote out the instructions for this purpose in my Super Gut book, my drdavisinfinitehealth.com book. It's not that tough, but it shows you how to use timing to figure out where microbes, because you want to know, are living in your esophagus and stomach and duodenum? Or are they where they're supposed to be way, way, way down in the colon? And this will help decide.

Now, by the way, Wendy, of course, your listeners don't have to get that device or submit to formal hydrogen gas testing. You can do that in the lab clinic, also. There are signs that tell you, "Yeah, you've got SIBO." The most common is food intolerance. All these people who say, "I can't eat nightshades." "I can't eat FODMAPs." "I can't eat histamine-containing foods." "I can't eat legumes." "I can't eat fruit that contains fructose."

If our great-grandmothers were here, they would slap us and say, "What's wrong with you people? There's no such thing in my time. And what's wrong with you people? There's nothing wrong with the food." There's something wrong with our gastrointestinal microbiomes that causes food intolerances because you get rid of the food intolerance. I'm sorry; get rid of the SIBO, and the food intolerances go away. Almost always.

Dr. Wendy Myers: Absolutely. Absolutely. And so let's talk a little bit about some solutions. So how do we fix our gut? How do we rebuild a broken microbiome?

Dr. William Davis: So if you've got food intolerances or maybe you have some other telltale signs like fat malabsorption, you see what looks like fat or oil floating in the toilet, or your fecal matter always floats, or you have a condition virtually synonymous with SIBO, that is likely, of SIBO, is so high. It's a safe assumption you have SIBO, irritable bowel syndrome, fibromyalgia, restless leg syndrome, neurodegenerative condition and autoimmune condition, obesity, fatty liver, and type two diabetes. It's a safe assumption. You've got, at the very least, severe dysbiosis, confined to the colon or SIBO throughout all 30 feet of your GI tract.

If that's true, you've got several choices. Sadly, if you go to the conventional gastroenterologist, he says, "There's nothing wrong with you." Or "Did you consult Dr. Google again?" Or, "I did your colonoscopy; I didn't see anything." But you don't see anything with SIBO.

And so if that gastroenterologist is reasonably well-informed, he or she will hand you a prescription for Xifaxan, the antibiotic, which is effective about 50 to 60% of the time. It's very expensive, and it's plagued by recurrences. You have recurrences over and over, more antibiotics, more antibiotics, more antibiotics. And it gets you, takes you further and further down, and disrupts the microbiome. So the conventional answer is not very good.

There are some herbal antibiotic regimens. Only two have been validated in clinical trials. The Candibactin regimen, the FC-Cidal, and Dysbiocide go together. But I've gotten away from that. I started asking different questions, Wendy. I asked these questions, "If you have SIBO, 30 feet of microbes, and you take a commercial probiotic right off the shelf, will the SIBO go away?" No. Highly unlikely. You might reduce bloating and diarrhea a little bit, but you still got all 30 feet populated by these microbes.

So what if we chose microbes that are known to colonize the upper GI tract, the small intestine? That's where SIBO occurs; that's where the battle is being fought. And what if we choose microbes that produce what are called bacteriocins? These are natural antibiotics, very effective, but they're produced by microbes that are effective against fecal species like E.coli campylobacter and salmonella.

So I chose three. Chose a strain of lactobacillus gasseri, the BNR17 strain, colonized the upper GI tract, and produced up to seven bacteriocins. The 6475 strain of lactobacillus reuteri, upper GI colonizer, up to four bacteriocins. And I added Bacillus coagulans. It does produce one more bacteriocin, and by the way, it makes the most delicious yogurt you've ever had. So I threw it in to make those other, to make very sour yogurt. This makes it a little smoother, a little sweeter, and more whipped cream-like.

Now we go even further; we ferment them. So microbes don't have sexual reproduction. There are no male and female microbes. They have asexual reproduction. One microbe recreates itself and becomes two; two becomes four like that. So we ferment it for 12 doublings. 36 hours. When we perform something called flow cytometry, it's a way of counting microbes with a laser. We get 300 billion B microbes per half-cup surface.

So we increased microbial counts by about a thousandfold, and then we consumed half a cup a day. For about four weeks, and so far, now, this is an anecdote, but about 40 people in our group have normalized hydrogen gas on their breath after four weeks of the yogurt. So we call this SIBO yogurt, but Wendy, I kind of regret calling it SIBO yogurt because it suggests it's only useful for eradicating SIBO, but it's really useful also for long-term prevention of recurrence because especially the gasseri and the reuteri are also keystone species. That is a very important foundational species that most of us have lost. So restoring it helps prevent the proliferation of fecal microbes.

So this has performed far beyond expectations; that's an anecdote in a large group; we will perform a formal clinical trial to validate this, and so forth. If I said, "Wendy, the solution is to remove 20 feet of your small bowel." You would say, "Oh, what? Come on, you better have damn good proof then." Right? But what if I said that the potential solution is something akin to yogurt? That's actually good for you anyway, even if you don't have SIBO.

Well, I think the hurdle, the threshold to doing this, is so low that even if somebody said, "I've been told I have a little fatty liver." Or, "I have a little bit of bloating and diarrhea. I'm not sure it's SIBO, but I'll try the SIBO yogurt anyway." The only hassle is you have to source the microbes, and then you have to know how to ferment them, which is very easy. That's a whole nother story, but it's very easy to do these things, prolonged fermentation, and you get all these other benefits out of those microbes. It doesn't end in eradicating SIBO. There's a whole long list of spectacular benefits of fermenting those microbes.

Dr. Wendy Myers: And is this something you can buy on your website or where do we get the yogurt fermentation with the microbes?

Dr. William Davis: So the hassle, to be honest, Wendy, it's a little bit of the hassle. So right now, there's no central source like the lactobacillus gasseri, BNR, and by the way, the reason I tell everybody these strains with these crazy names like BNR17 or ATCC 6475, is when we play with microbes, we often have to pay attention to the strain.

A good example, E.coli. We've all got E.coli in our guts. But what if you ate lettuce contaminated by cow manure and E.coli from the cow manure. You can die of that E.coli. Same species, E.coli, different strain. So strain can make a very, very important difference. Not always, but many times it does. So if I say lactobacillus gasseri BNR17, there's a specific source for that. It's in the Super Gut book. It's in my drdavisinfinitehealth.com, but we get it from the Mercola Market.

See, I get my microbes from manufacturers, and they send me samples. But if you call the manufacturer, they say, "Well, we're happy to sell it to you. It's 3000 kilograms; it's going to cost you $200,000." Well, no one's going to do that. So we wait for a large retailer to buy that large minimum and then repackage it for consumers. So that's what we have to wait for. So that's why it's so tough to find these things.

So there's a specific source of the BNR17. There's a specific source of the lactobacillus reuteri. So you have to place three different orders. But the great thing about this is once you have it, you can make the next batch of yogurt from a little bit of a prior batch. So you spend the money to buy the microbes one time, but you don't have to buy them again. Or even better, you do it with a friend or neighbor. This is what I did. I would give it to people, I'd give some of it, and it'd be good for making a few subsequent batches.

Dr. Wendy Myers: Okay, great. And so, do you have any instructions on your website about what strain to get and just how to make the yogurt, anything like that?

Dr. William Davis: Yeah. So you imagine it's kind of hard to convey in a podcast, but it boils down to this. Getting the microbes the easiest vehicle is some dairy. I like to use organic half-and-half because I do reject this whole idiocy about cutting your fat and saturated fat. That is nonsense. That should have been discarded 50 years ago. It persists, though, because of the nonsense around low cholesterol and statin cholesterol drugs. That makes tons of money for the pharmaceutical industry, even though it has nothing to do with cardiovascular health.

So I start with organic half-and-half. It doesn't have to be dairy; it could be coconut milk, could be hummus, could be salsa, could be fruit purees. I will tell you that dairy is very forgiving, though. You do need some device to keep it fermenting at about human body temperature. So around 98 to 102, essentially 100 degrees Fahrenheit.

So yogurt, some yogurt makers are like that. Some instant pots will allow you to do this. I use sous vide either basin or stick slow meat cookers; they're not expensive. You can get a stick sous vide for about $89. And there are some other methods also, but the key is you just want to have some method of keeping it at about 100 degrees Fahrenheit.

I add some prebiotic fiber to the mixture, like inulin or raw potato starch. It's kind of like adding cow manure to your tomato, a garden, and adding some cow manure. You don't get manure in your tomatoes, but you get bigger, juicier tomatoes and more of them. Same thing here. We're going to feed those microbes because what we're trying to do, Wendy, is get these super-duper high bacterial counts, so you can overpower the unhealthy fecal microbes that have taken over.

And so far, truly, I did not expect this to work. I thought it was going to work for a minority of people. To my great surprise, so far, anecdotally, it's working for the majority of people, and it's just something akin to yogurt.

Dr. Wendy Myers: Yeah, fantastic. And what about the L. reuteri yogurt?

Dr. William Davis: So that's one of the components of the SIBO yogurt, the lactobacillus reuteri. But a lot of people just want, they don't have SIBO, or maybe they did the SIBO thing and just want to get the reuteri long term. So your listeners will want to know what the advantage of reuteri is?

Well, first of all, we've all lost it because it's very susceptible to common antibiotics. So if you took, let's say, amoxicillin for a urinary tract infection or upper respiratory infection 30 years ago, you've lost your reuteri and other important microbes. When you restore it, wonderful things happen.

One of the things that happens is it sets, well, it takes up the rest of the upper GI tract and helps prevent SIBO. But beyond that, it also sends a signal to your brain through the vagus nerve to release the hormone oxytocin. And so you're going to find yourself liking people better. You'll say, "I like my partner better." I had a woman once. She said to me, "My husband says to me, he." They're both eating yogurt. She says, "He's not a very demonstrative guy, but one day he says, 'Hey honey, you know what? I've always liked you. I'd like you more now, over here sitting next to me.'" It means it's bringing out the best in people.

It makes them more generous. It makes them more able to accept the opinions of others, Wendy. It makes you more able to accept the opinions of others, even if you disagree. Isn't that cool? And then there are all these other effects. Physiological effects like a restoration of youthful strength and muscle. Increase in libido, increase in testosterone in males, increase in vaginal moisture in elderly females. So ladies in their late sixties and seventies have a lot of problems with that, this can restore that.

There is a preservation of bone density. There's an increase in the immune system response. In other words, oh, and ladies love it because they start to lose their wrinkles within a few weeks, and they get increased moisture. Ladies will say things like, "I don't need moisturizers anymore, face or hands because I'm so, I'm moist, like I'm a kid again." So smoother skin, greater muscle and strength, bone density, and libido.

Wendy, I think to return the clock back 10 or 20 years, and you'll see it. It's easier to see on ladies' faces. I think guys just don't pay any attention to their complexion. But you'll see it in the ladies, where I've seen it now over and over and over. There's a dramatic improvement in complexion. Now, this is more than about skin, but the ladies love the skin back.

Dr. Wendy Myers: And that's just incredible, and it just goes to show you how important our microbiome is in our health and can have such profound effects just by repopulating with a handful of these microbes that have been lost.

Dr. William Davis: That's just one micro, Wendy. There are other microbes you can use for other purposes. I have a professional tennis player daughter, and she gets beaten heck playing on these 95-degree days for three hours. Lays look like they play hard like guys now, and they're sore as heck. And if you were to measure muscle breakdown during an effort like that, you'll see that the blood is filled with muscle proteins from muscle breakdown.

Well, there's a microbe, bacillus coagulans. It's one of the three in the SIBO yogurt. Once again, this one reduces muscle breakdown dramatically so that you recover faster or you get bifidobacterium infantis into a newborn. And when that microbe is given to a newborn, it comes to dominate their GI microbiomes as it's supposed to.

And it helps the child sleep through the night and reduces the number of bowel movements by 50%, thereby 50% fewer diaper changes. The baby has improved neurological maturation and, as an older child, has less asthma, less autoimmune disease, less type one diabetes, less type two diabetes, is less likely to become obese, and has a higher IQ.

Dr. Wendy Myers: Yeah. I gave that to my daughter. I gave that to my daughter when she was a child. I'm so glad I did. I took her to an immunologist, and the doctor said he'd never seen someone with no allergies before because he was like, "I've never seen this before."

Dr. William Davis: That's correct.

Dr. Wendy Myers: Yeah. Just, I don't know. I got the idea to do that and just really has paid a lot of dividends.

Dr. William Davis: Lifelong, Wendy. Right? Lifelong. It's not just for a better birth or better toddler years. It's a better lifetime.

Dr. Wendy Myers: And she's never had an infection. She's never had to take antibiotics. I think she's never had an ear infection. She doesn't get sick very often. I mean, it's just been really a boon to do that.

And so, let's talk about your book, Super Gut. And so you had the runaway, runaway success with your book Wheat Belly, and I just love that you're talking about the gut and the gut microbiome because it's so important for people to be paying attention to this because it's one of the, just addressing the gut can solve so many other health issues that people just, the doctors and people looking for solutions just aren't making the connections.

Dr. William Davis: It's a revolution. I tell people, I liken this to 1982, and then you're too young to remember this, but I just gave you a Commodore 64 computer loaded with Pong. And you say, "Where the heck is this going?" Of course, we now know it leads to all kinds of things in technology. That's kind of where we are in the microbiome.

We're at the start. We're at the start of a revolution where it's, we're not that far away. If you say, "I have gout." Thereby high uric acid, we don't say, "Take allopurinol and colchicine." We say, "Let's make sure you have these microbes in your GI tract." If you say, "I'm overweight, a type two diabetic." We don't say, "Here are metformin and insulin and biota injections and Farxiga." We say, "Let's get these microbes restored." The microbial solutions.

And there are many broad things you can also do like fermented foods are the unsung heroes of the microbiome. Things like kombucha, kimchi, sauerkraut, veggies ferment on your kitchen counter. It should be almost no cost. Those are very powerful ways to bring back order into your gastrointestinal microbiome.

And so people need to know that they have at their hand access to extraordinarily powerful strategies. So just a little bit of knowledge and insight.

Dr. Wendy Myers: And so what are your thoughts on people saying that maybe kombucha is bad because it has wild yeast in it, or the other as pilaris seems like it's something that we need to be taking. But there are some people out there that claim that kombucha is problematic. What are your thoughts on that?

Dr. William Davis: Well, the criticisms of kombucha are typically too much sugar. But by FDA regulations, the manufacturer has to report how much sugar was in it at the time of bottling. So you let it ferment further. What I do is, if I don't make kombucha myself and just buy a commercial like GT's or something, leave it on your kitchen counter for a couple of days, like 48 hours, let it ferment the sugar out, and it should not be very sweet at all.

So the microbes consume the sugar. It won't reflect that in the label, though, because they have to report how much was present at the time of bottling, not the time of consumption. There's that. And then the typical microbes, saccharomyces boulardii, occasionally saccharomyces cerevisiae, and sometimes kluyveromyces species. Those are species that are adapted to the human body and are among the most beneficial of all microbes you can get.

So if I, let's say I had to take an antibiotic because I have a terrible infection. Well, it's going to screw up my microbiome hugely. The most powerful thing you can do to preserve the integrity of your microbiome is get saccharomyces boulardii. It's not quite clear exactly how that works. And we, by the way, make a saccharomyces boulardii sparkling juice.

It's really easy. You get a capsule of the commercial probiotic in the US, which is called Florastor. Flora, F-L-O-R-A stor, S-T-O-R. Other names in different parts of the world, but Florastor. One capsule, empty it into any volume of juice, just make sure the juice has no preservatives like potassium sorbate or sodium benzoate, cap agitate lightly, and loosen the cap. But it sits on your kitchen counter for about 48 hours, and after 24 hours, you're going to see it bubbling like mad producing carbon dioxide. So you want to make sure that the cap is loose because if you don't, it will literally explode.

And at 48 hours, especially in a warm climate like yours, refrigerated, cap loose just to stop the fermentation, and then drink a quarter cup several times a day if you have to take an antibiotic or just drink for fun; it's delicious. I have some mango passion fruit fermenting right now. It's delicious. If you do like apple cider, it tastes like apple soda, and it's one of the most important and powerful things you can do.

So people confuse the world of fungi because they think fungi, think mold, and mushrooms; they're fungi, also. But just like bacteria, there are really bad bacteria like flesh-eating staphylococcus. Then there are really good microbes,

lactobacillus reuteri. So to say all bacteria are bad, of course, is absurd. Same thing here. You can't say all fungi are bad or all fungi are good. There are all different kinds. Not all humans are good. There are some really rotten human beings. There are some really good human beings.

Dr. Wendy Myers: And so, tell us about what we're going to learn in your book, Super Gut?

Dr. William Davis: So I lay the stage for how to recognize what's going on in your microbiome and why being aware of all the things that disrupt the microbiome. Because if you're going to set your microbiome right, you've got to remove all the factors disrupting it, like chlorinated drinking water like the emulsifying agent in your ice cream. So being aware of all the, it's not that tough once you become aware of all these things. And a lot of it involves the return, just the whole foods, that is, foods that are not tainted by food manufacturers with additives or herbicides and pesticides, those kinds of things.

Also, I show you how to, so I compare the human microbiome to a garden, a backyard garden. So let's say it's springtime in a northern climate. How are you going to have a springtime garden? You're going to prepare, let's say, a 10 x 10 plot. You pick out the weeds and sticks and rocks, you plant seeds, then you water and fertilize it. A couple of months later, you've got tomatoes and cucumbers and zucchini.

The gastrointestinal microbe is almost the same. We're going to prepare the soil that has removed the factors that disrupted it. Chlorinated drinking water, glyphosate, emulsifying agents, processed foods. We're going to plant seeds. The most important seeds are fermented foods, not probiotics.

Probiotics are somewhat helpful, and that's because the current crop of commercial probiotics was made in very haphazard ways. They're not intelligent; they're not smart. The probiotic of the future, not yet, but in the future, near future, will incorporate principles like collaboration, that is, microbes combined because they collaborate with each other and may even have a greater chance of taking up long-term residence.

Current probiotics, I take it, it takes up rest for a few days, maybe a few weeks, then you, it's gone. A really effective probiotic you would take once, and it populates your gastrointestinal tract for a lifetime unless you're exposed to antibiotics. That has not happened yet. So right now, the current concept of probiotics is only somewhat helpful.

Fermented foods are the primary way to rebuild a microbiome. And then the water and fertilizer for your garden are just prebiotic fibers and related things, polysaccharides, things that microbes need. In other words, if you caged a dog or lion or other animal and didn't feed it, it's going to die. Right? Within a few days, maybe a week or so. What if you don't feed your microbes? They die also.

But there's a peculiar twist when it comes to the gastrointestinal microbiome. Many species when you don't feed them, provide fibers and related things, many species die or at least reduce in numbers. But then there are these odd phenomena. There are species that are able to exist on human mucus, so-called mucin degraders such as Akkermansia. Akkermansia's full name is Akkermansia muciniphila, mucus lover.

So if you fail to get fibers, for instance, Akkermansia normally is wonderful for you, about three to 4% of all microbes in your GI tract. You deprive all those microbes of the fibers. Akkermansia starts to proliferate because it starts to eat intestinal mucus. And it comes to comprise 15%, 18%, 24%, to 40% of the entire gastrointestinal microbiome. And it's eating the intestinal lining of your colon and small bowel. And that has all kinds of nasty implications in the intestines and outside the intestines, too, because of endotoxemia.

So people who fail to feed their microbiome experience higher blood sugar, weight gain, emotional and psychological effects, sleep disruption, skin rashes, fatty liver, all the familiar things we know. And so it is very important. And so think of it, so you can get your arms running in the backyard springtime garden. We're going to prepare the soil, we're going to plant seeds, we're going to water and fertilize it.

Dr. Wendy Myers: Fantastic. And so, is your book Super Gut, is it out yet?

Dr. William Davis: Yes, it is. It lays the whole thing out. Now, people get kind of bogged down in making yogurt. So I tell people, "Don't let this game make this tougher. It's really very, very simple." You just have to get a device that maintains human body temperature, and it should not be expensive.

You'll need some liquid. Take your choice. I like organic half-and-half. It doesn't have to be organic half-and-half. It helps, but it's not required that you have a prebiotic fiber. Inulin powder, acacia fiber, raw potato starch. These are inexpensive things. And then, we choose the microbe, Wendy, for the effect we want. If we want smoother skin and restoration of strength and libido, let's ferment lactobacillus reuteri.

If you want a smaller waist, let's ferment Lactobacillus gasseri. If you want fast recovery, as I mentioned earlier, let's ferment bacillus coagulans. In other words, you can pick and choose the microbe for the effect you want, but it means having to source it from sometimes from some unusual sources. And I list those, by the way, in the Super Gut book where you buy your microbes.

Dr. Wendy Myers: All right, fantastic. So everyone, go out and get Super Gut and start restoring your microbiome because I think it's also one of those things that you need to do before you start detoxification. Before you start, you have to have your gut work. You need to be pooping. You want all of that stress from the endotoxins created by your gut. You want that stress off the liver. And so your liver's

working optimally, doing the detox it's supposed to be doing, not dealing with all the microbes in your gut and all the poop that they're producing.

So it's really important to be fixing your gut no matter what you're trying to do with your health. So it is really important to learn how to do this properly. And so your book is the perfect place to do that.

Dr. William Davis: Thank you, Wendy.

Dr. Wendy Myers: Yes. Well, thanks so much for coming on the show, Dr. Davis. And everyone, if you haven't checked out Wheat Belly, that's an amazing book as well.

So again, thanks for coming on the show and everyone, I'm Dr. Wendy Myers, and thanks for tuning in to another podcast, another Myers Detox Podcast, where I bring you experts from around the world to help you upgrade your health and give you those little pieces of the puzzle that can help give you that solution that you're looking for because you deserve to feel good.