



Eat Right for Your Genetic Type

Guest: Donna Gates

Alex Howard So welcome everyone to this session where I am super excited to be talking with Donna Gates. Donna, welcome. Thank you so much for joining me.

Donna Gates Thank you very much for even asking me because I think we have a lot of juicy information to share.

Alex Howard Yeah, great. So we're going to be exploring in this interview two topics that are very deeply connected. We're going to be looking at genes and genetics and the impact that that has. But we're also going to be looking at digestion and Donna has an enormous experience and pivotal role in raising awareness around fermented food. So we're going to bring those pieces together just for anyone that doesn't know Donna, just to give her professional bio.

Donna Gates is an international best selling author of *The Body Ecology Diet* and *The Body Ecology Guide to Growing Younger*. She's also on a mission to change the way the world eats. *The Body Ecology Diet* was the first of its kind, sugar free, gluten free, casein free and probiotic rich. In 1994, Donna introduced the natural sweetener stevia to the US, began teaching about fermented foods and coined the phrase inner ecosystem to describe the network of microbes that maintains our basic physiological processes, from digestion to immunity. Over the past 25 years, Donna has become one of the most respected authorities in the field of digestive health, diet and nutrition. And in 2013, she completed an advanced fellow with the American Academy of Anti-aging Medicine.

Donna's extensive research and dedication to learning help us stay ahead of what's coming in the field of health nutrition. Her latest passion is nutritional genomics. She will soon launch a training program for practitioners that confirms the body ecology is a gut smart, gene smart way of life. I should also say Donna earlier this year ran the fantastic Genius of your Genes Summit, which I was very grateful to be invited to contribute to as well. So, once again, Donna, thank you for joining me.

Donna Gates Thank you. That was a long bio. I was listening myself thinking, my staff wrote that I would not tell you all that stuff about myself. Thank you, sounds great.

Alex Howard I think it's nice to have the context. And I find myself reading about introducing stevia in 1994. And it just makes me realize, we're talking 25 years ago, over 25 years ago and for how long you have been at the forefront of this field. And I think that the things that these days people are discovering that they think, oh, my God, digestion is so important. And it's people like you that have played a role in getting that into people's awareness.

Donna Gates In *The Body Ecology Diet* book, I introduce this new substitute for sugar called stevia and nobody know about it yet, it was like totally undiscovered. And I wrote it into the world and then the whole Fresh Network talked about this world in our gut called the microbiome, which in those days there wasn't that term, so I just made up the term inner ecosystem.

And it took a long time, it takes five, ten years sometimes to for other people to catch on and become interested. But the microbiome is the hottest thing now. And what's coming down the pipe for people that don't know this yet, nutritional genomics is next. Huge, it's going to take the world by storm, - solves so many questions that we have, so many answers in nutritional genomics. I'm really glad you asked to talk about both those topics.

Alex Howard Yeah. And I think – let's jump in there, because genetics is starting to get on the cultural radar in recent years, partly through some of the 23 And Me and some of these mass awareness tests that people can do. But just to contextualize this, how important are our genetics? What is the influence that they have on our health and well-being, be that our physical health or indeed our mental and emotional health?

Donna Gates To answer that globally sense, there is not a single thing they don't do, we would be dead, we wouldn't be here if we didn't have our genes because they're controlling everything in the body. So looking for neurotransmitters, for example, all of them are made by our genes. Then also vitamins and minerals, they're all made by our genes. Another thing the genes do so, some of them have important roles of transporting the genes. There's a magnesium transporter so we all know magnesium is important, but maybe we're taking plenty of it, but is it getting transported into the cells? Hormones, they controlled digestion, there's just literally not one system in the body that you can think of that they're not instructing, they are where everything starts.

And I'm sure people have heard that, they've been afraid that maybe they have the genes for a heart attack or genes for arthritis. And then experts in this field will come along and say, well, we control our genes. Well, yes, I'm a big believer that we need to know what our variants are like, where do we have weaknesses? So then yes, we can support them or work around them, that's the great thing about knowing them. You'll still see people out there telling you that looking at our genes is not ready for prime time, and I 100 percent disagree with that. Even though the word's getting out now, this field is already 30 years old. And it's just like computers, where all the stuff before we ever saw a big clunky computer. There's a lot of work going on for about 30 years. And then suddenly we saw this first big clunky thing, that's kind of where we are, we're in a clunky stage. But quickly, there's a whole lot we know and it's quickly evolving.

Alex Howard And I think sometimes people can be in some quite polarized perspective around you. You can have people that say, oh, well, it's all down to my genetics, I'm utterly powerless, I can't do anything, it's all predetermined. And then you've got others that are, well I refuse to be defined by my genes, everything is all down to my lifestyle and how I live. I'd be curious, what your thoughts of, where is the truth in that? How much can we influence?

Donna Gates A hundred percent sure, we all have thousands of genetic variants and so they're there. And if you're living a healthy lifestyle, they mean, the variants, the problematic ones may never be expressed. Except that we happen to live in a world

where we're maybe suddenly exposed to a lot of stress or you'll get things like 5G put upon you, we can't eat as well as you want, our food is sprayed. All of a sudden, even if you're trying to do the right thing. One of the things I've become really aware of is DNA damage. So our DNA is very, very fragile and we damage it all the time, every time we do get stressed. The 5G, as I mentioned is terribly damaging to the DNA. And also as we get older, our ability to repair the DNA damage significantly decreases.

So in a way, everybody is subject to DNA failing for them, in a sense. But then, I'm 74 and I don't have a lot, for my age, I'm very active in my mind still works great and everything, so I don't feel like I'm 74, but I am. And so it's made me realize all the things I've done, the self-discipline I've had over all these years, my genes, if I could look at them actually, they're probably in pretty good condition. But for sure, I'm aging you can't stop that because Mother Nature really doesn't want you here forever. Otherwise, where would there be room for the new babies coming along? And I'm okay with that, I mean, whatever, I don't want to be 115 like a lot of people are shooting for and everybody I love is gone. So that's not the goal. The goal is to keep your genes really working well together so that you can age well until you finally say, I'm ready to get out of here. That's what I'm all about.

Alex Howard And I think that's something.

Donna Gates I've a lot of SNPS. Alex, let me just say this. I have looked at my genes and I have a lot of variants that are really working against me, diabetes and stress things and so it's not that I got lucky, the lottery or something. I have a ton of bad genes for cancer, breast cancer and things like that. So I just want to say that, is you can reach a certain age and those genes aren't really working against you. So sorry.

Alex Howard And I think there's something as well that's really... You just mentioned that you know what your vulnerabilities are let's say. There's something that is very empowering about having that data. Because that can also become part of informing the health choices and the lifestyle choices that one might make.

Donna Gates Completely. I'll give you a perfect example. I was rather surprised to see I have huge risk for diabetes and we don't have it anywhere in the family. And I thought, wow, that's surprising. And then I learned from when I was doing all my A4MM work from Dr. Jonathan Wright, in a hormone course. He mentioned that if you get skin tags and I had a couple skin tags, and he said that that's really insulin resistance. And I thought, well, I don't ever eat sugar, I eat fermented foods. I do a lot of things to keep my insulin resistance level. If I have a couple of skin tags, not I'm not doing a good job.

And then I thought, but I don't eat sugar and then I realized, so what else would raise my glucose and my cortisol? I thought, wow, stress, for sure I have a lot of stress because I love life and I like to do too much, I put too much on my plate, and all that. So then I realized it's not a matter of controlling my diet or changing my diet, I got that. It was the stress that became the major focus of everything I do from now on. That's just a good example.

Alex Howard Yeah, definitely. And I think there's probably a good place to say a little bit about some of the genetic snps that can be relevant in trauma, but also in mental health challenges. From people that, it doesn't have to be a diagnosed mental health illness, but people that struggle with, for example, a bit more anxiety than other people, or people

whose mood could be just a little bit lower. So perhaps a little bit about some examples of that.

Donna Gates Well, for anxiety, there's a really important gene to look at called GAD-1. That's the gene that turns glutamate, which makes us really intelligent and really focused, and it's good to have glutamate, you have to have it. But it's supposing you turned and take the gut a GAD-1 gene turns it into GABA. Which is now, that's calming and then there's a cycle goes back into glutamate and back around. So many people have issues with those GAD-1 genes and so you're not doing that now. That creates a person who's very intelligent, but boy, their whole life is full of anxiety and they don't even know it. Because they were this way since they were conceived as a baby. And so they come out of the womb and the world has its moments of anxiety, a lot for some of us. And this is how you're reacting to the world so you wouldn't stand up and say, "well I have a lot of anxiety." But you do. And these are the people that if they get into a stressful situation, they lose it and start yelling at people around them and later on, they're very sorry. And so you can actually take a supplement, you can get GABA as a supplement and take that. They don't sleep well, so you want to take it, enough of it so you find yourself sleeping well.

But then another good example, and I think a really important gene is DRD-2. And that's a dopamine gene and I've seen a lot of reports, people's gene reports and this gene is amazingly under functioning in people. So dopamine, of course, makes you more focused and alert, it's a really important survival, gene. So when people that don't have enough dopamine, then they go out and they do things that are addictive. Or I mean, you could be shut in for a month or two or three with a virus, and then what do you know, you start playing a video game because you're bored to death, and then you get addicted, because if you have these genes, it's an addiction gene. You become addicted to alcohol, to work, gambling, whatever. This gene is going to make you more likely to become addicted. So let's say you knew that and you think, boy, I got a tendency to be a workaholic, I have to stop, bring my balance in my life.

Another really important and very common gene is called Comt, C O M T . So that gene is also a survival gene. If we get stressed out and that genes working slowly, your dopamine, adrenaline, noradrenaline, that all goes up, but now it stays up, you can't clear it. So even though the stress event is over, you start to feel okay, everything's okay. Your dopamine is way up there, adrenalin is way up there and you can't relax – even if it's time to go to bed or something, you can't. So magnesium and SAME are two really important things you can take to help bring that down. But also you would know to do yoga or stretching maybe before bed time to stretch out some of that stress so you can sleep well.

And then there's sleep genes. Like I have a gene variant called AANAT. And that is way down at the end of this pathway where you get tryptophan, which turns into serotonin, into 5-HTP and then finally serotonin turns into melatonin. But this gene comes in and this gene isn't working very well, and it doesn't turn the serotonin into melatonin, so you don't get sleepy at night. So you're a good candidate to take a little melatonin to make you sleepy. Along that pathway you'll see B-6 coming in and then also SAME again, is helpful for turning that gene, making that gene works better. I always find, like I love to find the problem because I love to find the work around for it. And people should know that knowing is good because there's, I don't know anything that doesn't have work arounds around it for you.

Alex Howard And then I think sometimes particularly looking at it from the point of view of trauma and mental health challenges. Is that people can sometimes wonder, well, other people went through this – perhaps someone had a good buddy or a good friend when they were growing up, but went through many of the same experiences and that friend's doing just fine. But they are feeling a real impact of those micro traumas and they're wondering what the difference is. And it may be the difference is a different genetic makeup. That might mean that perhaps someone's a little bit more susceptible, their system is a bit less resilient because of their genetic make up.

Donna Gates That's why I think it's so important, this new era that we're entering into, many practitioners who have never studied genes. This is so new to them and if you jump right into it, it can seem complicated, and then you don't need to know all the different genes. But there's certain ones, I think, that you definitely you should know about yourself, like, are you good at creating energy? Or do you have mitochondria genes that make your mitochondria less good at giving you energy? And let's say that your diet's really important. There's a ton of information in our genes about where we should be eating. And you might be out there eating a lot of saturated fat because you are hearing how good the ketogenic diet is and even maybe you feel better on it. But you have a gene, for example, APOE e4 that person that chooses to be on a ketogenic diet with that gene, there are risks for Alzheimer's and cardiovascular disease is huge, like eighty five percent. So you don't want to eat that diet because of that gene and you never just look at one gene.

You want to look at a group of them to see, but then you can advise people. Here's what works, this is how you know yourself better. And that's where there's actually the biggest lagging of all at the moment, is there's not enough trained practitioners to help people. So a lot of people have gone out and done 23 And Me and so on, but now they're finding that their customers have dropped significantly, people aren't doing that. But I think that's because they mostly did it to find out how much Neanderthal they had in them, where do they come from? But that's not really the good part of getting your genes tested, it's all that other amazing information that's hidden in your DNA and you want to bring it out. And, it's just golden as far as I see it.

Alex Howard Do you have any recommendations or preferences in terms of, if people want to get their genes tested? You've just done a summit with dozens of experts. I'm curious as to, what are some of your preferred pathways?

Donna Gates Well, first of all, there's going to be more options coming out soon. But 23 And Me, Ancestry – that's for ancestry. But 23 And Me has their latest version out and it's good, you can put 23 And Me into a program like I've got and populate it into these categories and you start helping people. But there's Self Decode, Joe Conen, I interviewed.

Alex Howard Joe's on the on the conference. Yeah.

Donna Gates Oh great, that's a must listen to, his blogs – everybody should read his blogs all the time because you'll start to understand everything really. He's got this team of researchers that are doing an excellent job of writing and all. So that's a great place to study, and his Self Decode gene tests is good. He's bringing out a new chip with even

more genes on it, so that's good. And then there's another company, Functional Genomic Analysis, there's a whole bunch of them a whole handful.

Alex Howard And Dr. Ben Lynch, I think has got one.

Donna Gates Ben's got Strategene and there's quite a few to choose from. So, and they're not extensive, 23 And Me can be just ninety nine dollars if you just buy the ancestry part, but you get the other part too for the same ninety nine dollars. But the most expensive ones are like two hundred dollars. So let's say two years from now you decide to go back and use another company, then you can just do it over again.

There's more information coming out, but I like companies that give you a lot of practical information like Joe does. And Joe and I are going to work together and I'm steering people to his kit from my Butterfly Genetics, which is my training program. That's really where there's a real need next. Because you want to go to somebody who sees there is a variant, and can tell you exactly what to do and I've got 30 years of experience there.

Alex Howard So let's pause this piece of the conversation, we'll come back to the genetics piece in a little bit. And let's just open up the piece around digestion and the relationship that that has to things like mood, to things like brain fog. Because often when people have those sorts of symptoms, they cannot be aware that just because the symptoms are happening, for example, in the brain or in the emotions or the mood – the origin, often is in the digestive system. I know this has been part of your work for many, many years. Just say a little bit about how that relationship, how really how digestion affects upon mood, mental health and that side of things.

Donna Gates Well, it's a huge category.

Alex Howard I'm sorry I just gave you a very, very big open question there.

Donna Gates Well, in a nutshell, everything has to do with it and so if your guts messed up, you're very self inwardly focused, noticing everything wrong, you've become really what people might say, well, she's just neurotic or a hypochondriac or something. Because it's a brain, we've got the brain in your head, we've got this brain in our gut and they're connected. Actually, the gut brain, I like to see it is just we have a brain throughout our entire body and there's a mass of cells in our head and another mass cells in our gut area, but they actually control the brain, it's hard to believe that. Some of the newer research is that the microbes in the gut are also in the brain in far less numbers. But, how did they get there? Well, messages are constantly traveling from the gut up to the brain. In a 100 messages, 80 of them are coming from the gut, 20 from the brain down to the gut, so you can see the gut's important.

Now, living in the gut are trillions and trillions of microbes – not just in the gut, every tiny little piece of the gut has trillions and they all have their own genes. So the genetic contribution, I guess you could say, to these microbes in our gut is just beyond anything we can understand. So what if they're bad? What if they're troublesome, like E. coli or C. difficile or any of the bad ones? And then the whole body's poisoned, not working properly. So it's a really important place to start, and if you've got any problem, you can't not be thinking of the gut. And that has almost become a battle cry for many functional medicine practitioners, first fix the gut. Now, that in itself, it takes more of a skilled person, but I think and have tried to simplify it for people. Because maybe you don't

understand if you have a leaky gut and what do you do for that? And how to get the right microbes in your gut.

If you're eating fermented foods, the right fermented foods, then a lot of healing begins to happen in the gut. And you're bringing in the right microbes that are producing the right substances. So they make folate and many of the B vitamins are made, they make vitamin K. So I have been teaching people for years, eat fermented foods like fermented vegetables, cultured vegetables. And there's some interesting stuff to say just about that, if you like, we can come back to that. But they're full of healthy bacteria, an unbelievable amount and you eat a few spoonful's with your meal, there in the food that you just ate. So they're traveling down along your digestive track and they're doing all these things they're breaking the food down so you digest it better, they're extracting minerals, they're pulling up poisons, that maybe the food you just ate has glyphosate on it. They're going to go right after that and get rid of it, so that's their job. Maybe you ate a meal with E. coli in it and you could get really sick, but they'll get rid of it right away.

And so it's absolutely essential to have and I think what's happened is that in countries like, say, Japan, where they have fermented foods in their diet, Russia always had sauerkraut, for example. They never understood the science behind why they're so important. Many people emigrated, say, here to America and they left behind, they didn't bring their fermented foods because they didn't understand how important they were. And even now, if I go to Japan and say, "so these little pickles that you eat and this miso soup and everything, why do you eat it?" And they say, "oh, it's good for you." That's all they know.

But I really, I wasn't the only one, Sally Fallon wrote a book and she talked about how cultures all over the world always had something fermented. But I really was the one that explained how this inner ecosystem came into place and why it's there, where it starts at birth, how critical it is to start at birth. Here's an interesting gene connection between our gut and our genes – so there's a gene called MUC-2 and that gene makes mucus in our gut. Now, MUC-5 A and B makes the lining of our lungs, so you want that to be working in your lungs because you're more at risk for infections like the coronavirus, for example. Anyway, back to the gut, MUC-2 is making mucus all along the lining of the gut. And that gene is there from the minute you are conceived, but it doesn't start working until some bacteria eat it, start eating the mucus like *akkermansia* for example. So they eat the mucus and then the gene wakes up and starts making mucus. And they need the mucus, they burrow into it and they live there, and so it's a cool example. Another gene, FUT-2, this is a really important gene for feeding the bacteria that are in there. So if you have like I'm an A, you're probably an O, you look like an O, right?

Alex Howard I am an O, am I? No I'm an A negative. Sorry.

Donna Gates You are?

Alex Howard Yes.

Donna Gates You look more like an O.

Alex Howard Yeah.

Donna Gates Those are more muscular, anyway.

Alex Howard I used to look more like an A negative before I had kids. That's another story for another day.

Donna Gates Well, by the way, people that are A's have been shown to be more at risk for getting sicker if they have the Corona virus, but anyway. I've been following blood type for many, many years, about 45 years, I've asked so many people, their blood type. When I started working with kids with autism, I always asked their mom, what's your blood type? What's your son's blood type? Over and over again, they said A, so most of the children with autism are blood type A, so I like to know blood type.

But our blood has different sugar in it, if you and I are A's, we have an A sugar and we secrete that sugar into our saliva, into our gut and tears and we're feeding the bacteria, like this in our sweat. Because there's bacteria that live on these places and we're feeding them with that sugar. So if you are FUT-2, have SNPS there, you're not doing that very efficiently. So you've got this brand new little baby that's coming in the world and he needs bacteria, but he needs to feed that bacteria. And so if the mom has the FUT-2 variant and the baby has that to, or one does. She doesn't make it in her milk, she's not feeding the bacteria from the beginning of the life. So you want to step in there with a little intervention and be sure that baby gets plenty of bifidus in the beginning of his life, and keep doing that through all of life, keep nurturing that digestive system because you could have variants.

I just did a consultation with somebody and she had variance in both those genes and all her life she's had gut problems. She's going to every expert under the sun and she knew she had gut problems. But this helped her understand what was going on, what to fix and why it's really literally started early in her life. So I think that's a great example of gene gut connection.

Alex Howard Yeah. And just how empowering it can be to have that insight and to have that clarity. I want to take a few steps back, Donna. You mentioned about fermented foods and there'll be people watching this that will be very familiar with that and others that won't be. What are fermented foods? So let's just give a little bit of context of just what you mean by fermented foods, maybe a few examples of fermented vegetables.

Donna Gates Well, lately I have been really into fermented beets because beets are an excellent source of nitric oxide. We have a commercial running all the time over here about how it gives you energy – eat and drink beets, drink this juice. Anyway, beets are great, but actually are very, very high in oxalates unless you ferment them, and I've got proof of that from university and all. But you don't want to be eating high oxalate foods, and that's another story, they can go look that up on the Internet. So if you ferment foods that are high in oxalates the bacteria and the fermented food eat the oxalates so they're not causing those stones, kidney stones, stones in your muscles and bones and pain throughout your body. Because beets are good, they are rich source of nitric oxide, but we just make them better when you ferment them.

And how I do that is I'll take my latest recipe is, I'll take red cabbage and beets, shred them up. I put in some carrots and a nice sweet onion and then fennel, fennel is really important. So I shredded up and put in a big bowl and then I'll take a blender and put water in it and then I blend up three apples, and put in our starter. I could explain why do that. Put in some other minerals there humic and fulvic minerals and the bacteria love

those minerals and they like the sugar in the apple. So you blend that together and pour that over your vegetables and you pack it into a jar and then let nature take over. In a week or 10 days later, they're ready to eat. That's how you make them.

But the reason that beets are such a great thing to make is, beets are one of the most important molecules in the body for fighting infections. And so imagine just because you're eating beets that you have built your immune system significantly, nitric oxide is really important for circulation. So your heart gets better. Now I know what the Corona virus, then your heart was damage if a person recovered they might have had heart damage, kidney damage, kidney and heart are related in Chinese medicine, are a Ying-Yang pair. So I just keep seeing these things happening all over in this relationship and I think, well, this would help that condition. So for many beets are great and that's how easy it is to make them.

Why I put the starter in there, though, is because you enormously up the amount of bacteria, particularly plantarum. And plantarum is an amazing microbe it's like Napoleon, he's like the leader of the pack and he's going to get everybody lined up and get rid of some of them, and he says you do this, so this little bacteria grows right beside it, they're super leaders. And probably Napoleon was a bad example because he wasn't such a great guy, but Alexander the Great or somebody like that.

They're really important to have them in your gut and I actually have a paper right here. I'm glad I thought of this because it says, "lactic acid bacteria efficiently protect human and animal intestinal cells" the epithelial cells is the lining. Okay, so the lactic acid bacteria basically protect the immune cells from enteric virus infection, coronavirus for example, so right there you got it, and where is lactic acid bacteria, well, that's what you get in fermented vegetables. Now, there are other fermented foods on the market like beer and wine and kombucha. And I don't recommend those because I mean, you have sometimes you have a really small amount, but they contain a lot of wildly swell fermentation and you don't want that type of fermentation in your gut. You want to know what's in there, bifidus, lactobacillus and akkermansia. So it's a fascinating world in there and you control it really by ultimately everything comes back to what we do, making things work and so this is how you control the microbiome.

The other thing we saw that actually takes a lot of work, but I think it's important to know we get grains and seeds and biodynamic rice and chickpeas, they're grown in New Zealand, Australia and brought in and fermented in a cultured. Then they're exposed to antibiotics which kill most of them, but there's some left, and you just grow those out, they're exposed to birth control pills, some are left, you grow those out. So we have a probiotic liquid that comes over in a refrigerated container and then, either a refrigerated ship or an air container, we get them here as fast as we can and they're super potent.

But what is special about them and about fermented vegetables is the diversity that they bring into the gut. And that is extremely critical, it's not like just take this bifidus or take this group of bacteria, it's the diversity and it's nature's. Every single quinoa, every single one there's like jillions on them. They have their own little microbiome, every grain of rice, every little chickpea, they each have their own microbiome. We don't even say what bacteria are in our products because there's no way to tell. Because every time we make a batch, you get jillions of grains, and grain-like seeds, so the diversity is just

extraordinary and that is the most important thing of all. That's what builds a really strong immune system.

Alex Howard That's really cool. And I'm just thinking, Donna, as well, so there's the fermented food piece that can have a really strong impact in terms of supporting immunity, digestive function and these pieces. One of the other questions I think people often have and I think in particular as we're talking about both genetics and digestion is, how about day to day diet and what people should be eating? There are so many contradictory opinions out there. You mentioned blood type and that's another, that's an example of a system around eating according to blood type. What can genetics help inform us? How important is bio-individuality in terms of what someone eats and can genetics help guide that?

Donna Gates Well, let's look at the M-6 gene that's dairy now there's a lot of controversy over dairy. Around the world millions of people eat yogurt, they drink Kefir both examples of ferments. I think this gene the M-6 gene if you have variants, they are actually due, two genes and they have their what's called homozygous, meaning my mom and my dad both gave me a variant. So that would look bad, maybe you think wow you're really going to have trouble. This gene is the gene that digests milk and yet you still retain the ability to digest lactose all through your life. So most people, a majority actually lose the ability to digest lactose. If they keep drinking milk after they're weaned, they can have digestive problems, stomach aches and all. So you can see that this person has these variants and say, you know, you haven't retained the ability to digest milk sugar, but you don't really want that milk sugar anymore. You're way better off taking the milk and fermenting it. Because it's going to be more digestible and it's going to have this great bacteria.

In the case of yeast, kefir it has wonderful yeast in it, which are really good to put it in the digestive tract. So that's something you can find out and steer them into a better. However, dairy has fat in it. So the person might be having, they're wondering why they're reacting to the dairy. Well, it could be that it's their gut, maybe the guts open and inflamed or there's someone who's always constipated. So those are two times when dairy is not good for you. But also, maybe you could do just fine on fermented dairy if you do it with a low fat version and you got rid of the fat, because you have a problem with fat.

And that's in the genes, it's all in the genes. And then the other thing is the quality of milk, in most of our countries – America, England, New Zealand, Australia, Canada, all of our countries that I know better. We've been getting our milk from an A-1 cow, which means that there is a type of casein that we don't digest, basically. And so mother's milk is A-2 casein, goats every other mammal, really. And in America, in the cow world, you want to get your milk from a real ancient cow or even like a jersey cow, because they produced A-2 milk. So even the quality of milk you're using is important. So I've brought in the digestion piece and I write in the gene piece, and that's why obviously we're gut smart, gene smart. But it's really good to tie all that together and so the person goes away and says, "oh, wow, I can be eating fermented dairy. I should be making it from A-2 milk."

And then the other thing is, let's say you've avoided it for a really long time. Then you can't just throw it in your body because the microbes in your gut don't know what it is. So what you want to do is introduce it slowly. You take it just a tablespoon of your

fermented kefir that you make at home, really easily and just put a tablespoon in some water and drink that for about a week or 10 days. What's happening is the microbes are saying, well, what's this? Let's organize ourselves here so that we can figure out how to digest this stuff, and then next thing you know, you're fine with it. So I've done that a lot with children with autism because they shouldn't have dairy, but their mothers eventually when they're recovered, they say, well, I really like to get dairy back in his diet and so we found that that works. Whether or not for everybody, but it's worked a lot. So did then answer that question?

Alex Howard That's really interesting. And I think there's something about one deciding what they eat with as much data as they can from different sources. And it might well be that someone's got a genetic vulnerability and they're getting away with eating something. But the body's having to work really hard to compensate and make that work. And they may find that even though they're not noticing symptoms eating it, if they cut it out they actually notice that they feel so much better afterwards.

Donna Gates Well, another example, the word Kefir. Well, Kefir originally has supposed to have originated from Turkey and in if you translate Kefir in Turkey, it means feel good. So fermented foods have an enormous effect on feeling good and our best example of that is our babies. So what I like to do is work with women when they're pregnant, because our diet's fantastic for them. And then the baby's born and they're giving all this good bacteria to the baby, just like they're supposed to.

But the babies themselves need to have an inner ecosystem established and this is very strange thinking, I'm sure no one has ever heard this before. But what we do is we take, the mothers are drinking fermented, either the kefir or maybe they're fermenting coconut water, they're eating fermented vegetables throughout the pregnancy. So what we recommend is that you takes some juice from the fermented vegetables and diluted in water and put it in the baby's mouth, when is a few days old. Because they never have colic, they always start off life and they digest everything and they're really alert. But that or the milk kefir. Well, actually, in Russia, they start their babies on milk kefir at four months. And then that's why Russians digest milk throughout their life, because they keep that microbiome going. But even though the coconut kefir in there, in the baby's gut, so things start off just like they're supposed to.

What is very consistently true is these children are different. They're very happy, they're happy children, they're a joy to raise, they're just. If you have a child who's screaming with colic in the beginning of his life, you're trying to bond with them versus this child whose like loves to eat, smiling all the time, developing really well, it's a whole different world. And so these kids grow up and they're talking at an earlier age because the gut brain development is so critical in the beginning.

Anyway, that's very consistent with our babies, the happiness factor. So I just think that's the best proof of all. Now, those microbes in their gut they're making, they're making neurotransmitters and all, too. So it's all tied together, everywhere you look, you can see a connection between a healthy gut and eating right in a certain way. And if you never know what your genes are, they'll be working for you. If you never get them tested you're doing the right things. If you focus on the gut, add the fermented foods. Now you'll also see criticisms of fermented vegetables, for example, like they are higher in glutamate, which again is contributing to intelligence. But I've never seen that ever be a problem. But another criticism is when people have SIBO, they say don't eat fermented

things like beer and wine and kombucha and fermented vegetables. Well there's something important to know about that, because maybe you can eliminate them initially. But you don't want to constantly have SIBO reoccurrence over and over again, you got to get that healthy gut established.

So that is why plantarum is such a cool bacteria because, so we make our vegetables with the plantarum. And plantarum is fantastic at degrading histamine. So now you start out with a little bit of properly made fermented vegetables like we teach, introduce that and then people don't have histamine reaction. Because you've got the plantarum in there taking care of the histamine for you. So anyway, there's a misunderstanding of fermented foods, they're not all alike and used properly, even therapeutically at the right time, you need them. We need to go back into them and not just blatantly say, well, I have SEBO so I can't eat any fermented foods, there's more to that story.

Alex Howard Donna, you're a powerhouse of information. I'm thinking for people that are listening to this that are feeling.

Donna Gates Overwhelmed?

Alex Howard No, I wasn't gonna say that. I was going to say feeling inspired actually. In terms of the potential to get greater clarity on both genetics, but also particularly on what's going to support their digestion. Given the impact that you talked about earlier between what's happening in one's digestion and how that impacts upon mental and emotional health. What I'm wondering is, where should someone start? So someone realizes the potential here, but is not quite sure, what do they do next? What your general recommendation for that?

Donna Gates So I figured that out when I started working with children with autism. So far, no one had recovered any and we brought a group of moms together and the kids started getting well. They all have yeast infections, they all have gut problems, they are not good detoxifiers. Most of them, about 80 percent of them have a gene called MTHFR, which actually has a lot to do with neurotransmitters and with detoxing.

Anyway, so you can see certain things about them, not detoxifying is a big thing. But that's when I also came up with this. The mothers would ask this all the time, when do we start? How do we start? And so the kids won't eat anything, they like the crust around pizza and that's all they'll eat or they're just really into carbs, really into bread and they're picky eaters. And so they won't eat broccoli. You can't say well they need vegetables. So what I learn to do is start them on the fermented foods, like with a fermented vegetables, you can put a bowl of chips like corn chips around your plate and put these vegetables in there. And they like to use their fingers and all, so just use it like a dip and start eating it, and then they like it a lot. The next thing you know they're always eating it. Same with the coconut kefir, that was a really important food for helping them recover, is that. So fermented is the same starter that we used to make milk kefir, but we're now putting in coconut water because they can't do dairy. So they'd start drinking it, sometimes they loved it, sometimes they didn't and so they had to hide it in some junky juice. But in a few days they didn't need the junky juice anymore, they liked it.

So there's a whole bunch of genes, taste buds in our mouth that are controlled by genes, by the way and the brain is becoming involved here. Next thing you know, they're drinking a whole lot of it, like the mothers would say, "he's drinking a lot of this, do you

think he'll become an alcoholic? Like, I can't get him to stop drinking it." We said "No, no, no. They can have as much as they want." The ones that drank a lot, had faster progress. But they were fixing your gut, they're changing their brain. Next thing you know they're crawling up in their mom's lap, eating the broccoli off of her plate. So I would say it starts there, just do your best. Some kids and people, they don't like the vegetables. Then also with babies, we puree them very fine, so they don't look chunky. Depends on, you can shred them as fine as you want them, but maybe they have a problem with chunky things and so you can puree them. But I always found that if we could just get them to start there, everything else started falling into place over time.

And then here's another thing, I know you've got great people in your Summit that are talking about many different things, yoga and many, many different things. But in this case, all the parents did have their children in speech therapy and other different types of therapy, and none of it was working until they fixed the gut and started coming out of their shell and becoming present. Like at that speech class, they're really working to learn how to talk better. Once they come out, they retain so much knowledge that when they are back into the world, they're very eager to catch up and learn as fast as they can. But also very importantly they -even very often I would see them taking over and advancing. I want this mom, I want that, not eating pizza anymore. I would be really surprised at how they were wanting to get well.

So that was a great training for me the years I worked with families, we had over 2,000 at one time, practices and families coming through our Bedrok group, which stands for Body Ecology Diet Recovering Our Kids. And we had left that information up there, but I stopped working because I became so frustrated with the political stuff that started coming in, the pharmaceutical companies and nobody was talking about prevention and it's easy to prevent it. So that's what we do is we try to prevent it. And it's the gut, I didn't know anything about the genes, but when you look at the genes, they're not any different from the rest of us with gene variants, I don't think is a gene issue, frankly.

Alex Howard Donna, I'm mindful of time. But I know there will be people that want to find out more, what's the best way for people to find out more about you and your work?

Donna Gates Well, our website is BodyEcology.com. So hopefully they'll go there and I just apologize if I said too much, I feel like I'm rambling here.

Alex Howard Not at all. I think it's really, really fascinating. And Donna, thank you so much for your time and contribution. I really appreciate it.

Donna Gates Oh, thank you.