



THE

FATIGUE

SUPER

CONFERENCE

How to transform your gene expression

Guest: Dr. Ben Lynch

Alex: So welcome to The Fatigue Super Conference and I'm really excited about this interview. This is one that's been a fascinating one to do some of the research for we're going to be exploring genes and genetic expression in fatigue and I think for a lot of people suffering from fatigue, this can be a big question on their mind. Like is this something, which is just in my genetics? What's the role of my lifestyle? How do those pieces come together? If it is something which has genetic origins are the things that I can do to impact their son to change that and a lot of those questions are going to be explored and answers in this interview.

Just so you introduce my guest. Dr. Ben Lynch is the best-selling author of 'Dirty Genes', which is a fantastic book that I've been really enjoying reading last couple days. So I really recommend that and is a leader in the field of nutrigenomics. Is also president of Seeking Health an innovative company providing supplements, courses and tools designed to help people overcome genetic dysfunction and optimize health. After earning his Bachelor of Science in Cell and Molecular biology from University of Washington, he then obtained a Doctorate of Naturopathic Medicine from Bastyr University where he now serves on the Board of Trustees. Dr Lynch lives in Seattle Washington with his wife and three sons. Dr. Lynch or Ben as you said I could call you, welcome. Thank you so much for making some time to talk to me today.

Dr Lynch: Awesome to be here Alex and I appreciate what you're doing.

Alex: So I mentioned your book 'Dirty Genes' in the introduction. I think probably the simplest way to start to just open this up a little bit is to give people a bit of a sense what are dirty jeans and we can come into a bit of how that then relates to fatigue.

Dr Lynch: Yeah, great point my granddad always told me always define what you're talking about before you start talking about it. So let me give you a bit of history on the name of dirty jeans first. When I was working with my team to get the book written I was really pushed to call it the Seven Deadly Genes

that was going to be name of the book seriously. And I was like, well, they're not deadly genes you have these genes, I mean, there's some benefits or some weaknesses and it's not like all doom and gloom and they said well, it's going to be a really great title and you know, a lot of people pick it up and I was like, well a lot of people are to be scared and not want to talk about it.

So I said well look genes have jobs too and the genes that we're talking about in this book are not going to kill you if you have them. There are genes, which if you have they can kill you before you're even born, that's true, but these jeans they don't kill you. They just, they may increase your behavior to be not ideal, they could actually make your mood to bit better actually at times but that improve mood that actually lead to anxiety then there's other genes which may you know, make you more susceptible to reacting to certain foods, but the same time they can clear infections in your gut. So then I heard my writer in the background she goes so they're kind of like dirty, dirty genes and I wow, what, she goes dirty genes. I said, that's beautiful because when you have the concept of a dirty gene, it's basically remember genes have jobs to do every single gene has a job to do and many times multiple different jobs. And so when a gene gets dirty, it can't do its job very well and the good news is with a dirty gene you can clean it up.

So Alex hold the book up for a second, please. So look at the cover there.

Alex: I just need to speak as it's going to jump based upon voice. So if I just hold it up and don't say anything people aren't going to see it.

Dr Lynch: Yeah, so if you look at the cover, it's basically, it's part of the cover is dirty and the bottom part is clean and my wife came up with that where it's you can just wipe your genes clean. And so it takes effort, it takes lifestyle and it takes listening to interviews like this to get you going but it's a good thing to understand that you actually are in charge of how your genes are functioning for the most part, you know, the day-to-day genes, not your eye color. But so it's supposed to be an empowering thing. So dirty genes is basically a gene that's not functioning well.

Alex: And it's, by the way it is a fantastic title, and it's a very well designed book because it's been sat on my bookshelf with a whole load of other books I've been researching and it's one of the ones that kept catching my eye so great job about things as well.

One of the quotes that really jumped out at me from the book and this is just kind of broaden this a bit to the idea of epigenetics. You wrote that 'yes your genes write your life memo but what they write is largely up to you' and I thought that was great.

So maybe say a bit about the role that we can play in terms of how our genes actually manifest in our life and our health.

Dr Lynch: Well, everything that you do is a choice, right? You can say, well not really but ultimately it is so when you choose to wake up in the morning and how you go to bed these are all choices. The next movement, the next word that comes out of your mouth, most of these are choices. So if you if you choose, let's say your kid leaves a Lego on the floor and you step on it, and you yell obscenities and scream and start throwing the Legos around the house. Well, it's what's going to happen is you're going to be turning on certain genes that are increasing production of stress neurotransmitters flooding your system with cortisol and you know start to sweat and your detoxification systems going to shut down. Let's say you just ate a meal your digestive system is not going to be working very well so now the food is going to sit in your gut rot and meanwhile, you're all flared up and crazy and meanwhile your kids genes who are listening to this their genes are also getting dirty because now their cortisol is up and now they're neurotransmitters are up, their digestion is off. Whereas on the flip side if you step on a Lego and you're like ow, dang that hurt and you say, you know, son come here, you know son come here and step on this Lego. Ow, yeah hurts doesn't it? So, you know, let's try picking up the Legos and putting them over here and next time when your friends or we come walking through or you come walking through it's not going to hurt. Okay. Thank you.

So now your genes are calm and collected. Your digestion is still good. You've made a different choice, same scenario different choice. So I really want people to understand because we've never been taught this. We've never been taught that what we do on the outside is really impacting on this on the inside. And so that is what 'Dirty Genes' is all about it's understanding at the genetic level every single thing that you do throughout your day and night throughout your life is turning on genes and turning them off and it's creating more work for your body or less work. And so the less work you put your body through it's like having a really, really good teammate or a very good employee who you do not overwork and they're always going to perform but as soon as you start giving them a whole bunch of extra work and work that's outside of their scope work is going to start sliding in the company as a whole is going to slide down as well, it's the same with your body.

Alex: And I think for those of us in the functional medicine world the idea that we can have an impact on gene expression is it's not such a new idea, although some of the ways that you explain this processes and the identification of some of the genes we can do I think is quite revolutionary. But for those outside of the kind of functional medicine world, just even the

idea that that your genetics don't determine your destiny I think it's quite revolutionary because I think well people say oh, well, you know that's genetic. What they're generally saying is well therefore you are powerless as to the impact this is going to have on your life.

Dr Lynch: That's right, you know, and I got really, really excited about the whole field of epigenetics first from Dr. Bruce Lipton that I got really excited from his work, that really opened my eyes. And then I got even more excited when I watched and I talked about it in the book 'Dirty Genes' the tale of two mice when these mice were genetically bred to have diabetes. cardiovascular disease and cancer, all three things with people are trying to stay away from and you know, they're scary as well. And these mice were genetically bred to get those conditions so science can then try certain things to you know, treat the cardiovascular disease so they were designed to fail but this one researchers like well, all right well let's try something. These mice have these genes, genetics, that are dirty and let's try to clean them up a little bit by giving them specific nutrients to help support their methylation. She did that and they never got those conditions, any of them, and I was like, wow that that's crazy. So, you know when that was proven in a lab, I was like that is really cool. And it was really interesting because at the end of her paper, she's like well, we don't really know what to do with this information was like we apply it right now.

Alex: One of the things also that struck me and it was the first time really in your book that this kind of any kind of dropped for me, which was that that each of these genes, and we'll come to a little bit later in the interview some of these seven deadly genes as they could be called, but each one doesn't just have a negative it also has a positive or as a strength to go the weakness. I thought that was fascinating.

Dr Lynch: Yes. Yeah. That was Rachel who brought that to light. So Rachel helped me write the book did a great job and Rachel is like well, you know you said you didn't really know what to call this seven deadly genes so why is that and so I started talking about it and she goes so there are some benefits too. I said, absolutely, she goes we really need to dial that in so take some time and figure out why that is I was like, well, it's pretty easy I can discuss it. And so for example, you want me to hit a couple examples?

Alex: Yeah, please do.

Dr Lynch: Okay. So in the book I talk about seven genes and we call them the super seven, not the seven deadly genes, super seven.

Alex: (laughs) It got reframed nicely there.

Dr Lynch: Yeah. So the super seven genes and each one of them have a function. And the reason I chose these seven genes is one they're very, very well researched. There's oodles of research published on them, tons of it, in human studies as well. And then there was a lot of application from me working with individuals and patients so I got a lot of experience in working with them. Plus I learned a lot from other doctors working with them. And if one of these genes get dirty, a lot of people have symptoms that are common everyday irritating, you know destructive symptoms that kind of worsen your day. You make your quality go bad, but they don't really cause a death sentence until they all get dirty and then you're really in trouble. So but this is nagging everyday symptoms that everybody has.

So, for example, MTHFR, which a lot of people know about these days, its primary job is to make a specific form of folate, which is called methylfolate, which is folate that has a methyl group on it which supports methylation. But there are other types of folate in the human body that a lot of people don't really realize MTHFR is like the famous one and the other folates just is kind of get shut down to the carpet. So if MTHFR's job is to make methylfolate support methylation and somebody is born with a dirty MTHFR gene it's going to be a bit slower. I myself have a slower MTHFR gene so I do not make as much methylfolate.

But is that always a bad thing? Not really because it's conserving a different type of folate for your body to allow for anemia's and white blood cells and well red blood cell production so you don't get anemia's and then platelets and DNA repair. So If you have a fast MTHFR then yeah, you'll support make more methylfolate and support your methylation faster but you possibly will have less of the folinic acid, which is a different type of folate, to support your white blood cells and your red blood cells in your DNA based production. And so and ATP base's like adenosine, which is needed for energy. So, you know, there's some pros and cons there and it's important to know both.

Alex: Yeah, and before we come a bit more into some of these different kind of genes that you outline maybe just say little bit around the role of methylation. Kind of what that is and how that that controls our gene expression just give people at bit more of a sense of how they can impact on how their genes express.

Dr Lynch: Yeah. So methylation it's an action term. So typically when you have 'ation' at the end of a word it denotes some form of action. So inflammation is the action in which your body is inflamed, determination is the action of you being determined, methylation is the action of taking a compound in your body and donating or to another one. So think of it as like,

you know, Santa Claus going around and delivering toys around different places but in terms of methylation, it's very specific about what it chooses to do and it donates the simplest compound in your body called a methyl group and it just gives it to something else.

So for example, if you have a histamine compound floating around in your body, so a lot of people are struggling with histamine related symptoms, and if you buy in the grocery store or the pharmacy and it says this is an antihistamine and if you take an antihistamine, you may feel fatigued. Well, that's interesting. Okay, so but histamine if you put a methyl group on the histamine, it becomes methyl histamine. So it changes its shape and it's the first process to get histamine out of your body. And if you methylate arsenic, it's the first step to get arsenic out of your body. If you methylate a RNA base in your body, it's going to turn it into a DNA base, which is really, really important. If you methylate this is most methylation also is the action typically to turn your genes off. Most of your genes are turned off, the majority of them, and they will be only turned on when they're summoned to do so, typically by you, so most of you genes are off and sleeping and you do not want all your genes working all the time. It's inefficient, it's a waste of resources, you'd be eating constantly and you would never have a rest and repair and be busy, plus you'd probably have an eyeball on your wrist and an eyelash on your thumb and a leg coming out of here. And you know you a lot of genes are turned off so methylation helps with that and that's why a lot of doctors and oncology try to reduce methylation during cancer because if you methylate during cancer it can cause a lot of other issues too. So methylation basically helps turn on and off your genes, but it also has very specific jobs as well for converting certain compounds like homocysteine is a compound that's found in your blood that if it's high can cause cardiovascular problems in neurotransmitter problems. If you methylate homocysteine, it's not as harmful anymore.

Alex: And just one other question, a couple questions before we come a bit more into these genes. So just another piece of this, I think of kind of putting in some building blocks here for people as we then come into some more of the specifics. Just say a bit about what SNIPs are?

Dr Lynch: Yeah, so a SNIP is a, your genes are built with a whole bunch of letters. So the MTHFR gene is built with about 20,000 different letters, 20,000 of them. And every one of those letters is a DNA base. So a specific DNA base and in a certain very certain formation will create that particular genetic code. Okay. So if I type the word wonderful that is a very specific sequence of letters and it presents wonderful and you read it and your body says, okay I just read wonderful and that's cool, get's me all warm and fuzzy. Now if I spelled it, you know, wonderfur, if I change the 'l' to an 'r' wonderfur, it's like what's that and

you might make an assumption it's wonderful, but you might be confused and with when you have a letter change at a very specific place in your gene, which is a SNIP, a single one nucleotide DNA base polymorphism change. So it's a single DNA base change in a long line of DNA bases. And if it happens to occur in an area that is really important for the gene, then it can change its function.

So for example, my hand is like this curved now so I could catch a ball now and I could also type with the same shape, but if I'm trying to shake your hand it's not going to work very well. So shape is really, really important and in one letter one DNA base change in a unique place in an enzyme coded gene will alter its shape and thus its function because shape denotes function in the human body.

Alex: Fantastic, thank you. And also, so in the book you help people identify which of these kind of seven genes might be playing factors by using a kind of questionnaire process. Are you a fan of any of the kind of forms of testing like the 23andMe test? I'm curious as to what are the ways that you like people to use in terms of getting more clarity in terms of their genetics?

Dr Lynch: Well, I think genetic testing if you're prepared for it is a very, very wonderful powerful tool. If you're not ready for it it's very scary, detrimental and it steers you and frankly in the wrong direction because I've seen Alex where a lot of people will order the genetic test and you know, they get this and they say, oh I have this red thing that must be the cause of my problems and then they try to associate this particular red thing with their symptoms. And it might not be that at all. And so, you know causation or association does not denote causation. So a lot of people look at the genetic report and first it's fear or it's overwhelm or both and then they try to fix it. Well, this is nothing to fix. You are you, you know, you and I are different, we're all different because of our polymorphisms and they have beneficial attributes. The key is knowing what they do and how they do it so then you can be more specific in your actions.

So, you know my genetics what I got my genetic results back first, honestly, I was terrified when I looked at my kids tonight's I was terrified. So now I'm empowered and I'm excited that I know how my genes work because it gives me an understanding of who I am as an individual and what my susceptibilities are, but I do not want people running out and getting genetic testing done first. Because that's the first thing they do is they try to fix these things and the whole concept of dirty genes is, in the book I didn't even talk about RSID or MTHFR 677T, I don't on purpose and there are people upset with me that I don't talk about SNIPs. I don't talk about specific SNIPs, I talk about the gene as a whole and that's the most important part. If you talk

about the genetic function as a whole then you can tell if that gene is functioning properly or not regardless of your genetics and that is a huge, huge point because let me give you an example. This is my genetics by the way so this gene here AOC1 DAO in the book, AOC1 is the official name of DAO. So one of the super genes in the book is DAO, which is this one and as I told you in the book I see.

Alex: It's a big one in fatigue, yeah.

Dr Lynch: It's a big player with fatigued. It's a big player with a lot of lifestyle issues and I discuss how it was a huge role in my life. But look, if you look in here, I'm minus, minus for it. I had no born dirty DAO yet I had all the born dirty DAO symptoms. So my DAO enzyme got dirty. So genetic testing gives a false sense of relief if you look at it and you see all the green lines like your wild your natural it's fine it's normal, it's actually typical it's not normal, but the environment can make it dirty, your actions can make it dirty. And so that is really, really powerful because if I relied on this and say my DAO enzyme is clean, my DAO gene is fine then I would say, okay well, I don't need to work on my gut. I don't need to work on my microbiome. I don't need to avoid histamine containing foods and such. But I started cleaning my microbiome. I started removing the histamine maintaining foods from my life and adding specific probiotics and it changed my life around. So understanding your genetics is powerful when you do it the right way and the crux of the matter is Alex is most people, including practitioners, are doing it wrong and I did it wrong for years too.

Alex: I think it's a fascinating point and I think I guess in many ways that people can go and order their own genetic profiling online and get it sent to themselves on one hand I think it's great that it empowers people to be more interested in their health but we have a policy, for example, at The Optimum Health Clinic that we won't release any test results outside of a consultation for the very reason that someone gets a test result goes on the internet and completely freaks themselves out without having context and discussion and everything around it. So I guess that's also part what you're pointing to here. It can be people can draw all kinds of conclusions without the right professional input.

Dr Lynch: And they do and what happens when you get your genetic report back and you find that you're homozygous for something or it's not normal then you freak out and you want to fix it right away, right away, right now and so you go to Google and you type in all these things, which is great I mean Google teaches me a ton to but it's you have to understand what is a true valid, you know information and just because it's on the internet obviously doesn't make it legit.

And the other thing is a lot of genetic reports are promoting their own business, you know, they want you to buy their supplements. They want you to buy their testing they want you to do X,Y and Z and I find that a huge, huge problem.

Alex: Yeah. Yeah, and I guess it's very compelling where someone goes well look it's a genetic report so it must therefore be the case that this is all as it is in the report. It's fascinating you're saying that effectively what is can be as a false negative that you can be told that something's not potentially an issue when it potentially could be.

So let's come a bit more into you know, particularly these seven genes and I think of these seven genes there's probably four or five that you identified in your notes to me beforehand that particularly can play a key role in fatigue. So if you're consulting with or you're kind of providing guidance to someone who suffers from fatigue somewhere on that kind of that spectrum, what are some of the genes that you're suspicious that could be dirty and could be having an influence. You've actually mentioned a couple so far already but perhaps you could go into those in a bit more detail as well?

Dr Lynch: Yeah, so it depends on their fatigue and when it's happening and I will tell you Alex if an individual came to me and they said here are my genetics, can you please look at them and I'm tired and these are my genes I would say, well, this is great information awesome that you got this let's put it aside for now and tell me more about your lifestyle, your habits, your environment, your history and your day-to-day in your foods and all that, you know regular doctor stuff.

A lot of people think that you know, any shiny new tool is going to be the one most used in your garage and genetics reports are the shiniest newest tool. There will be something else in the future that will outplay genetics and that will gain the most, you know, insights apparently for the role, for the next visits coming up in the future. But if it's person comes up to me, I do the dirty genes, I do the soak and scrub, I do the basic questions that you read in the book and I ask very specific questions so I know which genes are now dirty. And those same questions are in the book. So and I've come up with actually even more since I wrote the book to help guide me.

So, you know, when doctors ask questions, they're thinking about you know, they're guiding themselves to either confirm or deny the presence of something, right? So, if somebody has a you know, they're fatigued because they can't fall asleep at night and they're wired they're easily stressed out because stress is demanding and uses up a lot of nutrients you're staring at

the ceiling all night you just can't fall asleep and now, if you're a woman, you're struggling with PMS and that makes you all cranky and irritable and you're tired of it and you're tired of that happening because it's not really in your control and you know, so these this that's one type of tired. Another type of tired is you're walking down the store, down the aisle in the hardware store and you go down the pesticide painting aisle and you're like, whoa, I'm feeling you know, not so good right now and you just inhaled a bunch of these, you know, tons of chemicals off-gassing you're tired from that and then you go home and a different person will eat certain foods and they just are exhausted from those foods.

So it all depends on the type of fatigue and when you read 'Dirty Genes', it starts falling into place as to why can that can happen. Another type of fatigue is I fall asleep right away doc, but then I can't stay asleep. So it's a different one. So it's important to know these things and then from that you can make very educated specific targeted supportive ways to then remove those problematic symptoms and exposures by well, you're not going to walk down the pesticide aisle anymore, right? So you look at genetic report. You're like wow. Yeah. I've I got a born dirty GST gene and I really got to take careful to avoid chemicals in my environment. I mean like no wonder, I'm not weird it's like now I know why my neighbor can spray all day long and I can't.

Alex: So perhaps we could take one example, you mentioned for example for yourself the DAO gene, I'm interested in that one because I'm pretty sure that that's me as well. But it would be interesting to take an example of one of these and how you would then, if you recognize that that's playing a key role for somebody to use that as a kind of case study of the methodology you'd use in terms of how you would work with that.

Dr Lynch: Yeah, for sure. So in the book, there's questionnaires in each chapter and we call it a laundry list, which is pretty cool, and there's a laundry list 1 and there's a laundry list 2. And the two is more comprehensive. So for me, my DAO gene was really dirty, I basically checked every box in my quiz, and I was like, oh wow, Okay, seriously, I got a lot of work to do. And health is work health, is spelled work unfortunately. A lot of people want to take a pill to just continue with their lifestyle as they're going. I mean I want to do the same thing too I'd love to swallow a pill and feel great and continue my bad habits. If you will.

Alex: Take a pill and then not have to change at all.

Dr Lynch: Yeah for sure but it's not the case. So for me, look at a dirty DAO is something that is affecting so many people, millions and millions and millions of people, and the problem is it's histamine and a histamine intolerance goes

undiagnosed for decades, decades, before it's even brought up in the clinic. And nowadays that's changing. Yasmina Ykelenstam did a great job of bringing histamine out to the public with her great website 'The Low Histamine Chef', which she changed the name to healinghistamine.com. So she said, 'The Low histamine chef' was a great name, but it wasn't solving the problem so I change the url to healinghistamine.com. So you can just say I'm going to fix my histamine by not eating histamine containing foods and drinking histamine containing liquids, but Yasmina was brilliant enough well, that's not living, that's not life. I want to heal my histamine so I can do those things.

So for me what happened I had frequent bloody noses, I'm going to get a little graphic here, I was actually on my way to Japan or UK to do a conference and I wanted to kind of knock myself out for these long horrendous flights and so I rarely drink because I don't feel good from it, partly because of my dirty DAO gene and so I wasn't thinking about my dirty DAO. I got a little bottle of red wine, international flights it's free whoo-hoo, and I started drinking it and literally within seconds Alex I got a nosebleed and you know stress increases your histamine production. It actually increases your production and a release of histamine. So I was stressed because I'm on a flight on traveling and tired and then I got an extra histamine bolus from the red wine. And so I got a nosebleed and you know, I also got hot and flushed, which is histamine, and I will get sweaty feet and often sweaty feet. I was the guy who would always want to take his shoes off. You know one I have a rule in our house shoes are off but you know, it was easier for me to make to follow that rule because my feet were always hot and that was histamine.

Alex: It's so funny, sorry to interrupt you, I have exactly the same thing and I get people at the office are like do not like wearing shoes and I'm like, no it I always take my shoes off. That's a funny symptom.

Dr Lynch: Yeah, absolutely. It's a real issue and then I would eat certain foods like citrus and I wouldn't feel good. I didn't get nosebleeds or anything but I just didn't feel right and you know when you eat something sometimes it's a delayed response and then maybe 20 minutes later your heart rate, you can just feel your heart and your pulse just increasing like 30 times. It went from maybe a pulse of 60 to 90 and that that was also higher histamine. So all these things and I'd be quick to being irritable with my kids and it's like what the heck. So what I found is I did a stool test and I had high levels of a bacteria called *blastocystis hominis*. I was like, huh?

Alex: Yeah a parasite.

Dr Lynch: Yeah, so I was like, what's that and I was reading on the Internet and I asked the Chief Scientific Officer there I was like what is this? Oh, that's a real high histamine producing critter you got there. I was like oh, all right, so I blasted it. I blasted the blastocystis, a little oregano and certain probiotics and you know, garlic and what have you and I recessed it and it was gone. And I started taking, I looked at my probiotics, I was taking probiotics, you know, because a multi-strand probiotic all you hear about right the more strains the better and I was taking a probiotic that had lactobacillus bulgaricus and lactobacillus fermentum, which are two high histamine producing strains as I was like god no wonder I never really felt good. And I would always take it at night too and it would disrupt my sleep. So I looked at what strains did not produce histamine or actually metabolized and broke down histamine and I started taking that and wow that was a game changer.

And I used to, Alex I was so bad that if my kids dropped something on the floor like a Lego under the couch and I reach my hand underneath and that's where all the dust critters are the dust bunnies, I would get red dots all over my hands like that. Then I remember I started taking this probiotic and we moved into a rental whilst our house was being remodeled and I pulled the washing machine out because it wasn't working and the dryer wasn't working and my wife was like this sucks, this rental sucks. So what do you do, I said I think it's a nice rental, let me take a look. And so I pulled it out. Oh God it was so dirty back there and I was like man I'm just going to take a shower after just go for it clean it and I unplug the dryer vent and shook it out and just stuff flying everywhere. It was all jammed and after and I usually get a runny nose from it too histamine and I didn't react I didn't get the red bumps. I didn't get the runny nose. It was like, whoa! Wait a minute here. So I completely cleaned my dirty DAO and I was no longer reacting and that is when I knew that my DAO was clean, from that experience and I was excited.

Alex: I bet you were that's very cool. And in a sense to give people a bit more of a kind of understanding of how this works. So what you're really helping people to do is to identify which of the seven key genes may be factors via using the questionnaires in the book and then you're effectively helping them optimize their lifestyle and their nutrition and the way that they're living so to not just manage what's happening, but ideally to clean the genes as you were saying.

Dr Lynch: Absolutely. Just like Yasmina changed her website from 'The Low Histamine Chef', so a lot of people who think they have a born dirty DAO gene from their genetic test the first thing they do is like, oh, I can't have any histamine containing foods anymore. And the first thing they do is they download histamine containing food/drink list and they avoid that the rest of their life.

Well, let me tell you something, when you avoid certain foods, like oxalates are a big one these days, you know, people are avoiding oxalates like crazy, and when you are avoiding certain foods your microbiome demands diversity and your microbiome actually want some of that histamine and histamine actually stimulates your digestion. Histamine actually, you have quite a bit of histamine in your gut and actually if you have excessive histamine now you have reflux, acid reflux, but you need histamine to stimulate stomach acid and you need histamine to stimulate the movement in your digestive system to move your stools through. So, you know, it's really, really important it's all about balance, right? It's a bell shaped curve. And so the book 'Dirty Genes' gives you the insights in in a gross big picture way. Obviously, it's not just one gene that's dirty, it's a plethora of genes, but I'm giving you seven because if you focus on the steps that I talk about in the book, you're not only cleaning the DAO gene, you're cleaning a whole heap of other ones. So it's a simplistic view but it's not simplistic to such an extent that you don't get results.

Alex: Yes, and there are some significant differences in terms of these different strategies for these different genes as well.

Dr Lynch: Yes for sure, big difference and I will say that I think the first book that I've ever seen where the recipes are altered based upon your genes. So if you score on a laundry list, and you find that your DAO gene is dirty and your PEMT gene is dirty and you're MTHFR gene is dirty and the other ones are fine then I tell you it each recipe which genes it supports and by the way if your DAO is dirty substitute this ingredient for that ingredient.

Alex: Yeah, very cool. And I guess I'm curious as well of how much you've had the chance to get some feedback from people that have been following the protocol and because you know what you're describing in terms of your own experience of having managed to effectively clean the gene and not have that reaction, for people that are used to having those kind of reactions that can be, particularly when we get to kind of multiple chemical sensitivities with a kit can be significantly life inhibiting for people to you know with food it's a bit easier to go well I'm just going to avoid certain foods, but when it's chemicals and suddenly you're on a bus or you're on a plane and the person next to use been using perfume, for example, it can be pretty inhibiting to people's lives.

What do you see as the potential, like how far can people go and being effective in terms of changing these kinds of reactions?

Dr Lynch: Oh there can be a 100% complete shift. And Alex I did not write the book until I knew it worked. So a lot of people were pushing me to write a book years and years ago, but a lot of my work at that point was theoretical I

didn't have enough evidence and I did not have enough experience. I knew I couldn't just talk about MTHFR. I don't want to write a book just MTHFR. Look, you know, that's one gene out of 18 to 20,000 of them in the human body and I wasn't getting a hundred percent success by just supporting people's dirty MTHFR. There was something else that I had no idea what it was so it took years of experience and trials and errors and communicating with other doc around and flying to London and hearing other docs share their insights with me and say well this work that you shared me and this didn't and so just gathering all this information and once I started seeing recurrent patterns and trends that were happening over and over and over again, I was like, all right well, that's a COT, that's a Maui and I'll tell you that I changed the super seven list probably seven or eight or nine times as I was writing the book because as I was writing the book I was like, oh, I don't have a gut gene, I don't have a neurotransmitter gene, I don't have a detox gene, I don't have a cardiovascular gene. So I wanted to hit every major body system because I figured if I hit every major body system with a specific gene, then I would be supporting the entire body of the individual. So that was a really great, sting to catch because I would have had a hole in the book and people would not have resolved.

Now, is it going to help everyone absolutely not. There are some people that are really struggling with a whole heap of born dirty genes and their environment they can't change and if you cannot change your environment due to finances or location or job or family member, you know, you're taking care of your Mom or your you know, your grandkids or what have you and you can't get out of there. You know, sometimes the environment many times actually, the environment is really dirtying genes and people can't change your environment. And until you change your environment you will not get better. And another one is if you, I talked about it sometimes in the book but there's actually a really great sentence in there a couple of them. I don't remember how it went though where the most powerful things which clean your genes are not always tangible, it's more mindset related. So if people are going into this with a dirty mind set and woe is me and I'm so sick and they practice all these things and they change their diet, they change their environment, but their mindset is still sick and toxic and maybe they've got stuff that happened to them, you know, eons ago that needs to be counseled out and encouraged to get out. They will stay dirty. So counseling and mindset is a massive, massive hole.

Alex: Yes makes sense. Are there certain key principles that you recommend that everyone, obviously there's differences between these different genes, but are there certain key principles that are foundational that you would recommend that everyone pretty much be following?

Dr Lynch: 110 percent, for sure. So that's what the whole first section of the book called 'Soak and Scrub'. So the first part of the book is learning how your genes work and how you're basically in control of them and I describe each of these seven genes and then after that I walk you through, for everyone, this is what you do every day fundamental basic stuff to help clean them up and I walk you through stuff that I do every you know, every day not every day, I wish.

Alex: (laughs) You try to do every day.

Dr Lynch: (laughs) Yeah, sometimes I just blatantly go against it and that's okay too. You know, you can't beat yourself up. So I talk about that in the book to not blame. If you make a decision to dirty your genes because you want to have a party in your house and drink some alcohol or be around people who smoke or what have you it's fine. Just know the next day you're going to be having some dirty genes and here's how you clean them up.

But I would say that yes the 'soap and scrub' is for everyone and I really want people, Alex, I really want people off of as many supplements and as many over-the-counter stuff as they can unless doctor prescribed and it's life-related you've got to be on these things for life, otherwise get off because often times people are supplementing all these different symptoms and they have 3 supplements per symptom and they're taking 20/30 supplements a day or they're rotating them through and often times the supplements themselves are dirtying their genes because they're taking the wrong forms or excessive amounts or what have you or the combination of them and you also want to know your baseline. How are you doing without supplements? And you know, once you figure that out, how far you can get with your own choices your own day-to-day actions, you might not need very many supplements at the end and look I own a supplement company, but I know that most people if you try to supplement your way out of a sickness without changing your habits, it's not going to work and then you're going say oh Ben your supplement didn't work.

So I have some selfish needs out of that too. But I really want you making choices and I guide you through that and I will say that there's a bonus chapter at dirtygenes.com where you can go and you can download this bonus chapter. I really wanted to put the book in my publishers were like man your books too long already, but it's the ABCs of clean genes. So you can go there for free, you get a whole chapter and every letter of the alphabet is a basic pointer like A is 'avoid', and it's avoid toxic people and toxic chemicals. B is 'breathe', but breathe through your nose, not your mouth. So there's a lot of unique recommendations that you don't see just everywhere.

Alex: Very cool very cool. Before we come to the how people can find out more about you and your work and you met you mentioned a bit there. I'm also just curious as to what are you excited about for the future in terms of genetics and kind of what's evolving in this space?

Dr Lynch: So as you said that I just got this like, you know, you get excited your body gets lighter. So I just got lighter right there. Optimizing the lives of unborn children hundred percent. My goal is my company is moving from a supplement company to a health promoting optimizing life company and we're doing it. It takes forever to see it actually, you know, but there's a lot of moving parts but my goal is to help men and women make certain targeted choices and actions and nutrients and exams and what have you to make their baby the best baby it can be and I wish I had this information before my children were and the research is showing over and over and over that if you do certain things and avoid certain things and you take certain things during pregnancy then and prior to pregnancy and post-pregnancy for during breastfeeding, your child can just be this, you know, prodigy basically. And the RDA recommendations are garbage and the daily intakes are garbage the you know, take folic acid, you know 800 micrograms a day and by the way, if you have a recurrent miscarriage, you take five milligrams of folic acid and you take a blood thinner. That's it. That's nonsense. I'd swear but you know the Brits are too polite.

I will I will plug, you know, a colleague's book here who lives Washington, it's this book right here. This is a phenomenal book. So if you're if you're planning or know someone who's trying to conceive it talks about real food as pregnancy but it's way more than that. It's way, way more than that, she does a phenomenal job. Its over 900 published studies that she references in this book. So it's exceptional. So that's what I'm excited about.

Alex: I'm excited as well. It's too late for my kids, but maybe the grandkids. Sorry kids I read ben's work too late. So Ben this has been really fascinating.

How can people find out more about you and your work, you mentioned the website dirtygenes.com maybe say a bit more about people can find their and a bit more about the work that you're doing people can find out about.

Dr Lynch: Yeah. So basically my work is just trying to reduce the amount of guesswork that you have in health. You know, you hear the news, you read the magazines or you watch TV and you hear that selenium is good for cancer or you know or pistachios are good for that. And this is bad for that and you get these little articles, you know of information and try to put them all together and then you get the scrap paper mound and you have 40 different supplements on your desk because you heard about that supplement this

supplement this supplement. So I'm trying to clear up all that chaos and make it organized and you to understand how your body works on a biochemical level and you can do that, it's actually not that hard. It takes work for sure. It's a new language for sure. But you know how to speak one language at least so you just learn another one. And so that's what I'm trying to do. I'm trying to teach people how to avoid going to the doctor as much as possible and then actually go to the doctor when they need it and because Alex do you enjoy working with people who are still you know, living a toxic life and not doing the basics?

Alex: They haven't lasted very long in our company, no (laughs).

Dr Lynch: Yeah. So you would much rather work with an individual who was worked through all the fundamentals as much as they can. They've change their diet, they've change their lifestyle and they're still struggling and they're motivated and they're ready to go. That's what you want. Right?

Alex: Totally. I actually misunderstood your question there I thought you meant in terms of work with the staff. In terms of patients absolutely and I have to say that as a practitioner I'm quite fortunate these days that I tend to see people that have already done a lot of the of the basic stuff and that's where it gets really exciting, where you get to go beyond the fundamentals and I think that's where books such as yours and a lot of the work that's out there there's a lot people can do to start to get those basics in place for themselves. And I'm glad you mentioned the piece around toxicity and relationships and that sort of thing as well because yeah, as you said much earlier on the interview that stuff can be crucial.

Dr Lynch: Yeah, and I've actually made recommendation, well suggested, you don't really make recommendations, I suggested that when I hear there's a really toxic partner in the home I asked what are you gonna do about it and if they don't get that then say well, maybe you need a different partner. And they say what do you mean say? Well possibly divorce it sounds really, really, really bad and why don't you leave and that's sometimes it's happened and their health went from here to here and you know, it's unfortunate but sometimes you have to make those tough choices.

So, you know people can find me at drbenlynch.com on Instagram, you can click from that website Instagram and Facebook. I have a lot of videos where I'll just jump on Facebook sometimes and start rambling about something and answer questions. I love doing that and they're all the videos are recorded so my Facebook page is pretty full of videos and my company is seekinghealth.com. And then we're coming out of the genetic test this fall so Strategy and it's a genetic report that tells you to if you have this gene you

take these six different supplements for a gene. So it's really good for my company, just kidding. But unfortunately it's only released in the United States, but the report itself you can get globally and so a lot of folks in Europe or are using Strategy. So it's a great tool. It's overwhelming for many honestly, but I will say if you don't have initial sense of overwhelm, then you're not studying the right stuff.

Alex: That's a great place to end. Ben thank you so much. Again, just to mention Ben's book 'Dirty Genes' fascinating read and thank you so much for your time. I've really enjoyed this interview. It's been a real education and you've done a fantastic job of explaining some pretty complex stuff in a very simple way. So thank you.

Dr Lynch: Awesome. Thank you Alex.