

ADDICTION

SUMMIT



Brain Chemical Pathways Common to All Addictions

Guest: Sayer Ji

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Dr. Paul Thomas: Hi, I'm Dr. Paul. Welcome to this episode of the Addiction Summit. It is a privilege and an honor to introduce my guest now, Sayer Ji. He is an author, researcher, speaker, widely recognized thought leader in the natural health and wellness space.

He founded greenmedinfo.com and this is a site that I use quite a bit. I mean in one place, there is over 10,000 health topics covered and researched for us, 33,000+ peer reviewed articles. I was just looking at the addiction stuff today, actually, and I found over 591 articles just on addiction. And, of course, you can drill down into specific addiction. It is quite a resource. Thank you, Sayer, for putting that together.

You are featured in *What's with Wheat?* on Netflix and numerous other programs. You are coauthor of the *Cancer Killers*, vice-chair of National Health Federation, editor of the *International Journal of Human Nutrition and Functional Medicine*. You are on the steering committee of the Global Non-GMO Coalition. And I know you're doing a lot other things, too.

So, I really appreciate you taking the time to share with our viewers, this audience, on the addition topic some of your wisdom that you have gathered over your long career.

Sayer: Well, thank you for the introduction and for having me, Paul, on this. It is an honor, really. I admire your work. I know you have arrived at this topic through incredible experience and advocacy.

I have a little bit of my own story. I will get a little vulnerable. I was a pretty chubby kid for most of my life and struggled with food addiction from very early on. So it wasn't until I really started to wrap my head around food and actually get into natural health around my late teens that I was able to finally get rid of the extra weight. So food addiction that is close to my own personal struggles and experience.

Dr. Paul: So I think that is an area that so many of share. I mean I have struggled with it since right after high school. Until very recently I have sort of have been able to get a hold of the food aspect of things. But it has been a very long, slow process for me. But perhaps start there with your own journey, into what inspired you then and how did you conquer and overcome such a tough one, food addiction?

Sayer: Yeah. For me, Paul, I was a manic child. From 6 months of age onward, I was a severe bronchial asthmatic and would get adrenaline shots to keep me alive.

Dr. Paul: Wow!

Sayer: Yeah, I think it affected me pretty significantly, sort of struggling to breathe.

Dr. Paul: Yeah, that is a stressor.

Sayer: Fight or flight.

Dr. Paul: I bet you have PTSD still to this day.

Sayer: You know, I do, because if I go to a dentist and get specific anesthetics, a local, and there is a little epinephrine to keep the blood vessels constricted so that the anesthetic doesn't bleed out, I get a panic attack. And I'm working on desensitization with that. But it is interesting. I do have a little bit of that.

I believe that my relationship to food from early on, in terms of the addictive aspects, was stimulated by this need to self medicate. By the time I was 12, I would have been probably within the range of obese, very much just getting to that side of things. But it wasn't really so much the objective BMI. It was more just the despair, the self-loathing.

I had to get these special husky pants, which the waist was larger than the inseam. I remember we had to go to a special mall way off and then crying in the dressing room. I was really a despairing chubby kid in my own eyes.

Dr. Paul: Yeah. That is hard as a kid. Right? There is so much teasing that goes on.

Sayer: Yeah. I couldn't control myself. If I was around Entenmann's, that was popular in New Jersey, the pastries, I always felt it was hard for me to control. It was only after I really pulled back and started learning about how, for example, my asthma was really triggered by cow's milk consumption and stopped that. Then in 2 to 3 days I never had asthma again, never needed an inhaler. It was sort of like a microcosm.

Then you look at dairy, you find out there are all of these casomorphins, with opioid-like properties. You look at wheat and you have gluten exorphins and gliadomorphin, which is similar in terms of sensitivity. So I did actually naturally come to this understanding about food addiction through personal struggle. But then the literature was so interesting when it came to these foods actually being kind of like drugs.

Dr. Paul: Yeah. I am just totally impressed with GreenMedInfo. How did you go about coming up with that idea, just bringing the world's literature right to people's fingertips?

Sayer: Well, you know, I think part of it I was just fortunate that I had been brought into a family of science. My mom was a reference librarian and my father was a biochemist. I just sort of always had interest in that. But I wasn't aware of Medline until after college actually.

Then I started getting into natural health food. I started to look at some of the research out there and I found Medline, which as a physician, I'm sure you were introduced early in your schooling to. But us lay-people out there would love to know there is evidence to support some of these anecdotes about natural healing. When I found this resource, I was blown away. And I didn't see yet a place out there where there was all the research at one spot.

There was some guy out there, the site was ShrubMed. I thought that was so cute. It is ShrubMed, like PubMed. It would index various topics. And I was like, wow, what a great idea!

So I just wanted to plumb the depths of literature on various topics that I was fascinated by. I found it became an obsession. And, as you said, there are

10,000 different sections now I have worked on. And it is just something that I love to do, you know.

Dr. Paul: Yeah. Well clearly you are a very hard-working individual to pull that much information together for all of us to have at our fingertips. So thank you for doing that. Have you, yourself, had struggles that you have had to overcome beside the food? It could be professionally or personally or just in the family.

Sayer: Yeah. I think a lot of us being introduced to alcohol early in our lives. I know in college that was a free for all. You know, you go from a very protected nuclear family to you're there with everyone else partying. That was also a challenge for me. And so I have drawn a lot of parallels because of my experience, again, with being overweight and knowing there is an overlap.

You look at fructose and you look at ethanol, alcohol. Pathways activated in the liver and the brain are almost identical. Robert Lustig has done a lot of work on this. The hedonic pathway stimulated by fructose and alcohol is very similar. There is loss of inhibition with both of them and sort of activation of various monoamine pathways.

You could go there, dopamine for example. The lipogenesis in the liver, there is the same substrate. Fructose and ethanol is used to produce fat in the liver and you end up with very similar types of liver pathology.

It's interesting. Fructose, of course, is sanctioned. We are consuming 50 pounds a year per person, at least. And alcohol, too, it is still considered relatively okay to drink a lot. And cannabis is still going to potentially get you in jail for possession. So, it is interesting when you look at it through that lens.

Dr. Paul: Yeah. You mentioned hedonic, and then, of course, all the neurotransmitter pathways. I am not a very learned scholar when it comes to the English language. I grew up in Africa, so I'm a simple guy. But I think with all addictions, common to it is almost this pleasure-seeking thing, or just looking for relief of some sort.

Sayer: Yes.

Dr. Paul: So I know you have written *The Darker Side of Wheat*. And you have just alluded to the gluteomorphin, I think perhaps, maybe. Just share with our viewers a little bit, because I know you subscribe to food as your medicine. On the flip side of that, there is a real dark side of certain foods.

And you have probably researched this better than most. Share with us some of the pearls from your research on wheat.

Sayer: Absolutely. So what I found so interesting was that for many years I thought wheat was health food. In fact, when I was really into my nutritional obsession, I remember buying like a 50-pound bag of organic wheat berries and I was all into cooking it myself. I ended up having really severe gastric issues after trying that.

So I always thought wheat was good for me. It's full of fiber. It's a complex carbohydrates. And, of course, it is the staff of life, according to certain traditions and glorified even religiously, through the Eucharistic body of Christ. An agricultural organization, for its mission to eradicate world hunger, has an emblem of wheat on it. So it's glorified.

But we really never looked deep into it until we look at some of the research on all of the adverse effects that are linked to its consumption, a lot of which are actually psychiatric, schizophrenia for example, mania. Even some depression through some inflammation-mediated processes can be linked to consumption of wheat.

Now, there's a complex argument about the glyphosate that is also in wheat today because it is used in harvest and desiccation. And that's true. But I don't think that it is just in modern wheat. There is also the problem with the 23,000 different proteins identified in the wheat proteome.

And these are disulfide bonded proteins, which is the same thing when you vulcanize rubber or human hair when hair, when you burn it, it smells sulphurous. These are very hard to break down bonds. We don't have the enzymes in the human genome, actually, to produce the enzymes to break down these bonds. So the microbiome actually does that for us. There are some adverse affects of the bacteria that are recruited to do this for us.

But we just haven't had enough time to adjust to its consumption, as we would for foragables. So maybe 5 to 500 generations we have been consuming grains in mass. So that is the whole argument behind the paleo-essential diet being more optimal for our health and well being.

But wheat is especially unique because it does have concentrated a lot of peptides that have the ability to antagonize or agonize opioid receptors in the brain. So we do know technically they do have an effect that could be considered addictive in a very traditional way. We think of morphine as highly addictive.

And so I think that helps to explain why when you go off of wheat suddenly, maybe you have eaten it your whole life, many people will experience almost like a withdrawal effect. And then some will start to feel almost like they have woken up for the first time because of the removal of these types of neurobiological effects.

So my "Dark Side of Wheat" essay just plumbs the depths of the history of wheat, looking at the Roman Empire, how it used wheat as a political strategy. In fact, the bread and circus strategy is the most obvious. You know, you entertain the masses into sort of like oblivious, non-thinking and then you give them free bread. And the bread part is really important, because again, missing in any sense that anything is missing. Until you remove this drug-like substance from your body and diet, you really wouldn't know if it is having an effect on you.

So those who are curious, you can look at the literature. You can look at the history. But you can also try it and see what happens. And that is what I did. And when I did, I could never go back. In fact, every time I have made a mistake, Paul, it is just like almost like wow, it is like a zombie again. It is an interesting effect.

I got into this before the gluten-free fad, just so people know, a fad like cholesterol-free. On water bottles you see gluten free. Come on. But there is a real basis, I think, in science here. And I think it is worth looking at.

Dr. Paul: Yeah. I think if you are watching this and you feel miserable or you just don't feel great, you feel less than vibrant health running through every bit of your being. If you are addicted to something, you go through that cycle where you have got to have your something and then you are in withdrawal and craving and wanting. And then you get some relief for a time.

Until we try what Sayer is saying here, and I have done it. And I agree with you, Sayer. It is miraculous to be totally gluten free, and I would say even grain free for a period of time, and see what happens to your body. For me, it was the pounds. Well, it was more than that. My brain is a whole lot clearer. I feel better. But I couldn't shed weight as long as I was eating grains. I was always like 210-220, sometimes close to 230 pounds. I am only 5 feet 11.

Sayer: You are getting ripped now!

Dr. Paul: Ha, ha! Well, I don't know about that. But better, I am getting there. And it was not that hard once we got rid of all of that junk food and the grains especially.

Sayer: I am so glad you brought this up, because I didn't really tell some of the interesting tidbits of the story. So the thing about the Roman culture is at one point they were known as the wheat empire. They would conquer peoples that weren't living in this sort of agrarian model subsistence, and they would force them to be part of the wheat economy. And that is actually how they spread around the ancient world.

And some of the tribes in Germany and Ireland that were very resistant to being conquered, they still had some of highest rates of celiac disease. They weren't first forced through genetic bottleneck die-offs, which occur. You couldn't just suddenly eat wheat if you hadn't your whole life. And that's sort of the point. And now today, we think it is normal and that many of our ancestors made this radical shift from the ancestral diet to this one.

But one of the things that they did with these Roman soldiers, which is an interesting historical curiosity, is they would deprive them of wheat rations and give them barley instead if they misbehaved. It was, I believe, so addictive. And that's one of the things that listeners might consider.

Sometimes we think hunger is this sort of morbid thing that happens, where, "Oh, gosh, my blood sugar is getting low. I've got to eat more." That's not real hunger actually. Instead of eating all this crap, we start eating more green leafy vegetables, sweet potatoes, nuts, berries and you get nourished. First of all, you don't feel hardly hungry anymore, is what I have noticed. But that morbid craving, the neuroendocrine roller coaster of the blood sugar going up and down and up and down, starts to level off.

So, when I stopped wheat, and even better when I did grain free for a while, that really seemed to bring me to a new level. But there is genetic variation and some people will need to have more carbohydrates than others. So we are not proposing that this is the perfect diet for everyone.

But my basic argument is that wheat is a species-specific intolerance. So I do believe that there is not a single human on this planet that does better on wheat than without wheat. So that is sort of my story. I am standing pat.

Dr. Paul: It is definitely not an essential nutrient.

Sayer: No. That is a really good point. The other connection is with glutamic and aspartic acid.

Dr. Paul: Yeah, tell me about that.

Sayer: Yeah, it is very helpful, because we know about aspartame. Well hopefully we all know that it is a pretty toxic synthetic analog, aspartic acid, which is naturally occurring in certain foods. It is not an essential amino acid, as is glutamic acid. We don't really need it. It does stimulate the umami receptors and therefore has a natural sort of like circuit in place. And, therefore, it creates this sensation of like, um, like yummy. And it is like a wow effect.

And the aspartic acid is the same thing. It is cytotoxic. I won't say necessarily in natural form it is toxic, but it stimulates the nervous system to the point of calcium influx. It is a neuron in depth. So when they isolate these things out or they selectively breed it into a food to make it a higher amount, it becomes more addictive.

So my point, I guess, is with greens generally, but definitely with wheat, there are very high amounts of this aspartic and glutamic acid. And that is one of the other red flags to consider if we are looking at the food addiction part of the puzzle.

Dr. Paul: Yeah. So it is excitatory to our nervous system and we get a little charge from it.

Sayer: Exactly. It is why I believe the people who take the B12 sublinguals, they don't look closely. They are taking cyanocobalamin. It is the cyanide-bound form. And I have taken it and I know what it does. It stimulates you. And I think it is like nicotine. A little bit of it is a deadly poison that just stimulates your system.

Certainly, in medicinal context, it can help move a sluggish liver chi, you could say. But it is still not delivering what you think. You want the methylcobalamin or hydroxocobalamin.

Dr. Paul: Yeah. I always thought I was pre-diabetic. And really, it was just that I was eating the wrong things because if I had cereal or anything with wheat or gluten in the morning, something highly processed, with 2 hours I was just starving and even shaking, you know that blood sugar dropping.

It's 1:30 here in Maui. I woke up at 5:00 a.m. I haven't eaten yet today and I feel great. I will be eating soon. But you know, it is just different when you eat real food, whole food. It is shocking, actually.

If you are watching this and you are thinking *that's nuts*, you ought to try it, eating real food, whole food and not reaching for those grains and those addictive carbohydrates that are highly processed.

Sayer: I love it. There are so many alternative views of really what makes us tick. And we've focused for so long on the chemiosmotic hypothesis that Mitchell presented. This was, I think, in the late 1960s that ATP basically is the foundation for all the energy and that we are glucose burning machines.

But the more I look at alternative views of cellular bioenergetics and just physiology, we know now a body can take chlorophyll and harvest sunlight and speed up the Krebs cycle and actually harvest energy ambient in the environment through the water, through the 4th phase of water that Gerald Pollack has pulled out. Melanin also is capable of taking sunlight and converting it to chemical energy.

So, there are at least 3 other ways we can take energy from the environment. And this is a new view, because I think that really we think of food material, it has more to do with biomass than it does, we're actually replenishing the biomass, the wear and tear on our body. You in Maui or me here in Florida sucking in the light, drinking good water, getting the good air, you can actually do some pretty miraculous things without our traditional view of what we need in terms of calories and amino acids, etc.

I don't want to go too mystical or New Age, but it is interesting. When you liberate yourself from the food craving cycle and this constant need to put more food in and get it out, you would be surprised at how much less we really do need to feel well.

Dr. Paul: Yeah, and you will feel better, not being in that vicious cycle. So speak a little bit about craving. I think you have looked into this in the past, sort of the neuroendocrine cycle part of it.

Sayer: Yeah, I think it is interesting that the brain is just this monstrosity of energy consumption. I have been fascinated by the so-called encephalization event that started about 2 million years ago. Suddenly our brains explode in size relative to other simians. And we don't know exactly what happened. But as a combination of factors from the transition to more nutrient dense animal foods to hairlessness to some retrovirus, they believe might have helped to also accelerate the growth of the brain.

There are so many theories on what has caused it. But we have to accept that our brain is so massively entitled in its mind to glucose. It's like constantly, within 2 to 3 minutes of not having a steady supply, it's almost like a fight or flight reaction. In fact, I believe there is a signal produced that activates the adrenal glands to secrete adrenaline and increase cortisol and elevate blood sugar in response to the fluctuation.

And so food is a big part of this. We are sending so much of this information to our cells of non-safety and non-satiety. And so I think it has so much to do with understanding that when you are engaging carbohydrates especially, there are a lot of literal grenades there.

You look at fructose and you look at just the glycation capabilities it has relative to glucose. It is about 7 times more likely to cause glycation of a lipid or protein, which renders all kinds of terrible downstream effects as far as endothelial health. The primary killer on the planet is heart disease and it primarily starts with the endothelial damage. And a lot of it has to do simply with us taking in massive excessive quantities of carbohydrates.

I mean, you look at our body, it is protein and lipids, some minerals and water and then some carbohydrates on the surface of the cells, and glycogen. The amount of carbohydrates we are consuming and we could take protein and turn it right into glucose and gluconeogenesis. We could take fats obviously and do beta-oxidation.

The amount of carbohydrates we consume is just so insane. The fact that we are living and that we eat this much of this stuff is pretty amazing. I acknowledge I love the taste of gluten-free bread, sugary stuff. It is like my eyes roll in the back of my head and you have to fight me for that next gluten-free cupcake.

Dr. Paul: Yeah. So actually you threw out a term I think maybe you could help our viewers understand, and that is glycation. I actually did not know that fact you mentioned, 7 times as much glycation going on.

Sayer: Yeah, versus glucose.

Dr. Paul: That is crazy. I mean we ought to just ban fructose from our diet if that is true, or at least high fructose corn syrup.

Sayer: Yeah, that's right. Well with sucrose, that is like white sugar, there is a glycosidic bond between 50% fructose, 50% glucose. So it breaks down slower.

But with high fructose corn syrup, these are monosaccharide combinations. So you have between 50 and 50 fructose and glucose and then up to 90% fructose and 10% glucose. So the cells need glucose and that is what they utilize. But fructose goes right to the liver. It's not something that will cause our cells to be like, "Ah, I have what I need to produce my ATP."

So fructose is then stored as fatty acids. And that is one reason why there's an epidemic of non-alcohol fatty liver disease through fructose consumption. And fructose, of course, is so deadly, you could argue, in this form, because of the fact that it reduced the affinity of insulin receptors.

So insulin resistance is the basis for metabolic syndrome. This is things like dyslipidemia, hypertension, basically blood sugar disorders. It is all connected now, overweight. Fructose is kind of really at the center of that.

Again, fructose in the context of a whole fruit, let's say watermelon. You think, "Oh my God, this is loaded with fructose. I am going to have an insulin reaction." It is amazing the research on diabetics and how therapeutic it is. I mean, yea there is arginine and citrulline that dilates the blood vessels. There is this incredible lycopene.

It is interesting, fructose in a whole fruit like watermelon has enough of the other elements. And obviously God or nature made it. It doesn't seem to have these effects as far as obesogenic and insulin resistance producing. So context is everything.

Dr. Paul: Wow! If you are watching this and this is new to you, because some of this is a little bit new to me, even. I mean I have known high fructose corn syrup was bad, but I had no idea that it was this bad. We got to get that out of our homes. Right? I mean you are poisoning yourself.

And we are all struggling, most of us, not all, with weight and that brain fog that we get from all these chemicals that are bombarding and bathing our brains. What suggestions do you have for folks who maybe have to make a transition in how they are living and how they are eating?

Sayer: It is a great question. My biggest advocacy to start out with is eliminate wheat and eliminate cow's milk, which is one we didn't talk too much about. But I get the raw. I get the A2 variety, which has got less of the casomorphins and less of the liability. But those 2 foods generally I feel are the most addictive. And they are most firmly established at the pyramid of the average Western diets or plan. You know, every meal has some kind of wheat flour and some kind of cow's milk.

And keep in mind, the thing about dairy that I find so fascinating is this is the original moment of nourishment. You come outside of the womb and there is a breast there. And the first sip of nourishment is thermic, it is emotional, it is spiritual, it is microbiomal. That sip of milk, the lactose and the casomorphins are present in the human breast milk and the micro RNAs and all of this. That is your first act of nourishment.

So when people continue throughout their life to consume the milk of another animal, they are eating cheese and they are drinking milk, it is like sort of an infantilism there. And there is an addictive non-individuation I feel like those are. I know for some it might be a stretch, but I do feel that is one of the sort of psychic or emotional underpinnings to addiction to dairy.

And so, of course, you get that out of the way. You mentioned about the craving, the insulin-releasing properties of wheat—I know that Dr. Davis has done a pretty good job in *Wheat Belly* of making that a key issue—are pretty significant. And, of course, the brain, too is very susceptible to insulin resistance.

So when you remove those 2, of course what do you do? That's the crazy thing. People are like, "Wait, what do I eat?" Well, that's a sign that you are a far gone addict, when you don't eat anything without those 2. You go and move, if you need to, to gluten free. But keep in mind, a lot of the gluten-free products, being based on rice and barley and other processed gluten-free grains, are pretty high in the glycemic index and glycemic load and insulin-releasing properties.

That is why the advocacy is to switch to what I have called dicots versus monocots alternatives. So quinoa, amaranth, buckwheat, those are much different. They are more like in a fruit category than a grain technically. And they are not really pseudo-grains. They are sort of a whole different kind of plant. They tend to regulate and stabilize things, if you need to eat that kind of carbohydrate.

Now you are not going to find a good quinoa, amaranth, buckwheat bread. They don't stick together. That gluey protein, that is where a lot of the addictive stuff is and a lot of the inflammatory proteins. It is not going to be there. But you are going to have to sacrifice something if you want to live to really feel good.

So that is one of the things you start with. But you also start getting away from the cooked grain or grain alternative, gluten-free around. You want to go more towards the foragables and the berries and nuts and good fats. That is the primary missing link. One you start getting more fat adapted, away from the carb adaption, then you start to feel nourished deeply. That is just such an efficient to deliver the type of fuel that our body thrives on.

So that is another way that I would encourage people to move towards. Don't just pull it out of your life. But add in other things that are going to nourish you. And then start to bring up the high-quality fats in your diet as well.

Dr. Paul: Yeah. I think my parents' generation and it carried on through mine, and I passed some of this on to my kids, was that was bad. Right? And nothing could be further from the truth. Everything in the stores is still low fat this, low fat that. And what are they putting in to make it low fat? Sugar and fillers and partially hydrogenated fats, if they are going to put in anything.

So what would say, Sayer, would be your favorite good healthy sources of fat? You know when you are talking to people, you need to add fat to your diet. What are talking about?

Sayer: Okay, cool. Well I love things like avocado. Those to me are just fundamental to my diet. But I do use coconut oil. I use wild palm oil. There is a wild harvested form. Because it does cause some deforestation, people get really upset about that. I do olive oil quite a bit, flaxseed oil. I also eat a lot of these foods. I eat olives, I eat flaxseeds, I eat chia seeds, I eat walnuts. I try to get the fat in the right form.

Whenever you extract fat, as you know, you are going to see oxidation. Unless, of course, you get a good brand that nitrogen flushes the bottle. But I try to get my fats from my food as much as possible.

One cool way to do it is you can do a smoothie. And you can use things like coconut milk, which will have the whole spectrum of things that you are going to want to nourish yourself with that has the fat naturally in it. You can do a base of flaxseed, put blueberries, acai berry. Put in any variety of super fruits, cacao. And you have such a nourishing, energizing food that you don't have to chew on and get down. It is a different experience of food.

Dr. Paul: Yeah, Yeah. So to pivot a little bit away from food, as we think of the person who is struggling with an addiction, I wonder if you might address the topic of mindfulness as it might relate to addiction.

I think we live in this stressed out state and we are constantly looking for external relief. And we are maybe disconnected from ourselves. What have you kind of come to understand as far as that relates to addiction?

Sayer: Well, I think that that is probably the most important part of the conversation. There is a lot that we are talking about with food, where it seems like, "Okay, that makes some sense. I see how I have sort of fallen victim to this habit. I can pull back."

But when we really about the deeper emotional and spiritual motivations behind food, sometimes it is about stuffing back feelings. You know, if you have an emotion that is difficult, you consume something sweet and delicious, your body will naturally occlude that emotion. And it will try to then digest things. We use food that way. I know I have personally.

I am not saying starve yourself. But I do think that the mindfulness part is the most important. As long as we start to become aware of what we are doing, what we are feeling, over time, if you will, the soul starts to recognize patterns. And I believe most of us will start to choose the pattern that results in less suffering.

So I do think the mindfulness portion of this is extremely important. But it is so hard to teach and to make it sound attractive. It does take some hard choices. And you almost have to treat yourself, as my experience is, as your own child. You have to love yourself as you would a child. And some of us don't have children. I do. So I constantly get reminded of what that means.

But that is really part of it. I think it is part of the individuation process. Do I want to live a life where I just feel wonderful? Or, do I want to live a life where I am just getting by and I am just kind of like thwarting myself here and there with foods of surrogates? But what I really want might be connection with others or I want to be more successful or find my life purpose. I think that a lot of those issues are embedded within addiction. So, I appreciate you bringing that up. It is so important.

Dr. Paul: Yeah. I like what you mentioned about treating yourself as a child. So Sayer, I witnessed my wife had some difficult childhood issues, some abuse and very scary environment she grew up in where she would spend hours hiding in the closet. And she had been in counseling for 15 years with a PTSD expert. And I was supportive of the process. And then things changed. And then she did [inaudible] at the culmination of this childhood trauma workshop.

She had to visualize herself, eyes closed, in a small group of supportive people. Visualize yourself as that little girl and now you be the parent. Don't worry about the people that we are supposed to protect you. You can now protect yourself. I mean I started crying, because she was telling me this story.

And I have to tell you she was transformed. She was like, finally, in her 60s, she was able to be free of that inner. And that is sort of an example of mindfulness. I am not really an expert on mindfulness. But I was glad that you brought that up. Are there are other practices that you might suggest our viewers think about for becoming more mindful and in tune?

Sayer: Yeah, absolutely, because I have been working on meditation and mindfulness for awhile. Not because I am good at it--quite the opposite. I get distracted easily. And I always love working and trying to do other things. For me, what has been incredibly helpful is exercise as a precursor to being in that still place. As I understand, even yoga, it exists in large part to prepare one for the place where your body is able to just sit there and be still.

So for me, it broke me out of a lot of habits. What I started doing was instead of getting up and eating breakfast, it is sort of the intermittent fasting concept. I would be surprised by if I just went out and ran, I would feel so much energy. And not to mention, I just wouldn't be hungry in a way that I would expect to. I just ran 10 miles. You think, I didn't have breakfast and quite the opposite it would be. Like, oh my gosh and all this energy and I feel so good.

I believe that the ultimate solution to the effects of fructose and gluten and dairy on producing these opioids in our system is exercise. You are feeling this bouquet of chemistries as a bolt out of your brain. It is just remarkable. So that is what helped me the most.

Those out there who struggle, it is so hard to think, "I have to stop eating this. You know that sucks. It is what I get for enjoyment." When you start moving yourself and feeling your energy, that is a type of nourishment that isn't going to come through one's mouth. And then it is so much easier to just kind of sit back and take a minute or 2 longer, meditate, and it will come natural. That to me was the missing link. I needed to do that to get to the meditation point.

Dr. Paul: Yeah. Thank you for that. We have had a few of the guests talk about exercise. But a couple of you have really tuned in to how it was exercise that really was the key factor that turned you around. You know, when you are struggling with some addiction, whether it is food or something else, when you are out there getting some exercise, you are in your body.

Obviously there are some people who have exercise addictions. So you want to do that in moderation. But for the rest of us who probably should exercise a little more, this is really an important tip.

Just to give you an opportunity, I don't know if through your research you have come across things that you just feel would be important for this summit. Maybe it is specific to any of the given addictions. I want to give you a shot at just sort of some free-wheeling thoughts you might have about various addictions, if you wish.

Sayer: Yeah. Well, you know, I was always fascinated by word origins. So the word *addictus* is the root for addiction. It means slave, Roman slave. It is Latin. And I think that's what is behind this for many of us. It is identifying, again, what we have become enslaved to and realizing that embedded in overcoming addiction is a sort of type of taking ownership of yourself and mastery.

And that is really what it is, I think mainly for me. I am still struggling daily, every food choice I make, and not just food choice but portion. You know, I have always been one that just wanted to have more of something. I have tried to reach a point where there is 20% of my stomach felt empty. And that is the key for me, just really trying to live a life where I feel like I am in control.

Now I can control where I am being a good parent to my inner child. And then find ways to satisfy that sweet tooth. There is an amazing recipe you can do for a chocolate mousse where it is just avocados, cacao, maple syrup, maybe a pinch of cinnamon and cloves. It has been the best dessert I have ever had.

Dr. Paul: And avocado is your fat in there.

Sayer: It is nourishing. And talk about a cardiovascular like miracle because of what cacao does for endothelial function. And avocado has all this oleic acid, which is like the ultimate fuel for the heart for beta-oxidation. The heart can run on 100% fat. It is an incredible organ.

There is so much there that you can access thanks to what is happening. You go around the street and there is a vegan, gluten-free restaurant these days and you can get these sorts of things. There is the raw food movement. So we are fortunate to live in this time. I think it is a great time for people to kind of give themselves joy.

But just make sure you are doing it smart, not doing it just out of desperation. But you are doing it because you love yourself. And that is where we are moving.

Dr. Paul: Yeah, Yeah. So, when I was in the midst of my alcohol addiction, back when I was struggling daily to stop, I didn't love myself very well. I was more in a place of desperation.

But we are hearing this message, folks, over and over again. If you are watching this and you are feeling that emptiness inside that I felt back then, here is the call from Sayer Ji and so many of our other guests, love yourself. Just love yourself and start on this journey of taking care of these simple, but not easy things, like the nutrition, like getting out there and exercising.

What other tips would you give folks who are trying to kind of basically rework their lives to be in balance? Do you have some other suggestions?

Sayer: Yeah. I mean being in nature, I know it's not easily available for everyone. Some of us live in cities. But I just recently got back from this trip in Zion, off the grid by the way. And I was just blown away by how healing the environment was. And without that, it is so much harder sometimes.

I would suggest also that people stop getting on their phones when the sun goes down. Or if they do, put on the night shift, so you don't get the blue light. That really has a pretty impactful effect on people. So little things like that, you would be surprised.

Also, if you have a cell phone, this is probably the last thing I will say that people should be aware of. These things are microwaves. And they have these powerful signals that directly affect the alpha-waves in the brain. You can put in a Wi-Fi, put yourself on off when you are home. And just try to remember that when you have this around you or holding it, that is a microwave going against your body and affecting your moods, your thoughts.

It is really important for people to realize. We need these things to survive these days. I get it. We are connected now, but it is like food. So if you consciously do that, remember you are your own parent. You are loving yourself. You understand the inner child is running around trying to just survive.

But you have got to kind of pull yourself and love yourself and make better choices, slowly but surely. Don't beat yourself when you don't make perfect choices either. So that's part of it.

Dr. Paul: Yeah.

Sayer: Love yourself is probably really [inaudible].

Dr. Paul: Yeah. So, I am just sort of amazed. I have done so many of these interviews now, Sayer. And this message just keeps coming through, from master and wisdom expert and you are a researcher who knows the world literature probably better than almost anybody. And it still boils down to love yourself and take care of yourself. I hope you guys are getting the message. It is so, so true. And you have to start.

I have a little image in my book, *The Addiction Spectrum*, that is coming out. And it is 3 frogs sitting on a log. And one of them decides to jump in the water. How many frogs are left on the log?

Sayer: Two?

Dr. Paul: There are 3. They just decided. They didn't jump.

Sayer: [Laughs]

Dr. Paul: Thanks for playing along with me Sayer. So the point of that one is you have got to get into action. Right? You are sitting here watching the summit. And you are thinking, oh this is so hard. But yes I am going to do it. Well do it! Just start tomorrow, start right now. Change your diet. Love yourself.

And, Sayer, I would like to give you one last shot. I keep always giving one last shot. Any final pearls of wisdom? Or if you want to just share with our audience the things that are exciting you about the future and the things you are doing.

Sayer: Yeah, I would say, because you just inspired me, it is just so much sometimes. We struggle with alcohol addictions worse. But sometimes, again, just don't eat any more wheat. Just try it. You've taken control that part of things. And if something is going to open up, try to fill that void with truly healthy food alternatives like berries and organic apples, whatever. And you will see a difference. That is a loving step for your body, not overwhelming.

But as far as me, I am just focused on a book, actually, that will come out in spring on regeneration. So it is very much in line with me wanting to move to a place that I can share tools that people can use to take back their health and realize that their body is a miracle. I mean that is really the premise. We are here, we are living and we shouldn't be, given what we are exposed to.

Dr. Paul: Yeah. So I am regeneration, since you opened that little can of worms. I don't know if people realize this, but Sayer, you probably can share some of the wisdom on this. Our cells are turning over at a fairly rapid rate, depending on which cells we are talking about. And when you are struggling with addiction, you're thinking, "I am doomed." No, your body regenerates, given the food it needs. Share if you want, just a little about regeneration and how amazingly miraculous our bodies are.

Sayer: It is beautiful. That is what I think everyone who has gone through a struggle needs to hear. Our body has these stem cells within that have an unbroken chain of replication going back to the last universal common ancestor, which was about 3.4 billion years ago. So those germ line cells we inherited from our mother and father, became the zygote that then differentiated into what we are today.

They represent a sort of immortality that biology actually has built into it. And anytime we damage a tissue, an aspect of that lineage is recruited to regenerate new tissue. And there is a limit to that. Over time it is not going to get easier. But you would be surprised, late, late into life, 100 years plus, there are people that are constantly still able to recruit those cells and regenerate. That brain, that is heart, that is liver.

All of the tissues that we once thought you were just born with that and anytime you lose a cell or 2, they are gone forever, we know that is not true anymore. So, the overall vision is extremely promising. For those who feel like, "I'm going to die tomorrow. There is so much sin in me. I have done so much harm to myself." Yeah, there were some mistakes that were made. Again, if one loves oneself, that is when this process can just smoothly unfold and the miracle of healing will happen. I do know that is true for everybody.

Dr. Paul: Yeah, so true. I was at a conference this past year where research was presented--it hasn't been published yet--where fasting released stem cells and actually the islet cells of the pancreas started making insulin. This was an insulin-dependent diabetic. And I always thought once you are an insulin-dependent diabetic, you are doomed to have to have insulin shots for the rest of your life.

If stem cells can heal that, then I don't know what addiction thing we are dealing with here, but folks, we can heal it. We just have to get busy with living, loving ourselves and getting the right nutrients and getting rid of that fructose and all those cereals and wheat and grains. It sounds drastic, but you know what? The other side of this healing process is true freedom.

You touched on that bondage thing that addiction is. And I think the flip side of that, Sayer, is that you can have freedom once again.

Sayer: Exactly. And that is the beauty of it. Once you reach that place, it is because of the darkness in the struggle that you are going to be able to experience even more joy and liberation. It is part of nature. It is, you know, yin-yang. The joy and suffering are connected like this. And that is the promise and it is true.

I'm a believer myself. I've gone through a lot of struggles. And it is good to know that you are leading this summit and have this understanding.

Dr. Paul: So folks, if you are watching this, it doesn't matter how far you have fallen. If that is the case, that's just a brighter story you have. Fight for your freedom. It is yours to take. And thank you, Sayer, so much for sharing your wisdom on this segment of the Addiction Summit.

Sayer: My pleasure. Thank you.