Diet Doctor Podcast
with Michael Moss
Episode 73

Dr. Bret Scher: Welcome back to the Diet Doctor podcast. I'm your host, Dr. Bret Scher. Today I'm joined by Michael Moss. Now Michael is an investigative journalist and author and a Pulitzer Prize winner.

He's written the book Salt, Sugar, Fat, and then more recently, the book Hooked. Both of these books look at the processed food industry and what they do in terms of their techniques to get us hooked, hooked on their food, how they use the combination of salt, sugar and fat, how they use different parts of our biology, how the food tastes in our mouth, or how it feels in our mouth, how it hits different taste buds, how the crunch in the sound is, all these details are scientifically decided and scientifically explored and investigated to find the best combination to make us want more.

Does that make them addictive? That's a loaded question that Michael explores in his latest book Hooked. And then we talked a little bit about what is the definition of addicted? Are all foods potentially addictive? Or only certain ones? How do you decide what are the societal and legal implications?

And what are the implications for you as an individual? But I think, even though we don't come to a conclusion, and there's a lot of controversy about what addiction means, I think the key is what it means for you as an individual or for all of us as individuals, that the deck is sort of stacked against us that we're fighting science that's engineered against us for our health, that for our health we don't want to eat more and more of these overly processed products.

But that's how they're designed. I think that's the main take home. And then what can you do with that information, we explore that as well in his interview with Michael Moss. So I hope this helps you become more enlightened about the process of processed food industries, how that impacts you, how it impacts your health, and what you can do about it. So enjoy this interview with Michael Moss.

Michael Moss, thank you so much for joining me today on the Diet Doctor podcast.

Michael Moss: Great to be with you. Thanks for having me.

Bret: So as I mentioned in the intro, you are an investigative journalist, an author, Pulitzer Prize winner, And most notably, or most recently, the author of the book Hooked. Previously, you wrote Salt, Sugar, Fat, both similarly sort of addressing this concept of how our food system has gotten away from us, I guess you could say and how it's become industrialized.

And this question of free will, versus the industry sort of bending their products to override our free will, so obviously, that's my quick summary. But tell me a little bit more about your motivation to write both books and sort of the transition that happened within you between the two books.

Michael: So I kind of stumbled into the processed food industry world by accident, I was actually in the Middle East writing about terrorism, when I got in some trouble and had to come home and one of my editors at the New York Times spotted this outbreak of salmonella in peanuts that were being manufactured on the border of Georgia and Alabama, and I went down took a look.

And that was this credibly eye opening event because weeks and weeks were going by and these big companies using these peanuts as ingredients hadn't yet figured out that in fact they were using them because they'd lost control of their food chain. And so recalls were happening months later than the actual outbreak itself as people were getting sick all over the country.

And then I started writing about pathogens in meat, e-coli especially at one point of my best sources who tests meat for the meat industry for pathogens said to me, you know, Michael is tragic as these episodes of contamination are, you really should look at what my industry, so, the processed food industry, is intentionally adding to its products over which it has absolute control.

And he was worried mostly about salt. But that led me to look at sugar and added fats as this unholy trinity, if you will, in which the processed food industry relies on to get us to not just like their products and want more and more of them.

So that's what prompted me then to decide to sort of write a book and pretty early on in the book writing process of Salt, Sugar Fat, the first book I wrote, I came across this treasure trove of documents that put me at the table of the largest companies as they were formulating marketing position themselves in the grocery store and in fast food restaurants. And it was those documents that enabled me to meet key insiders who opened up and revealed even more secrets.

And the overwhelming sense you get from those documents in that material is that this is an industry that's been driving day and night to get us to love their products and get us to want to come back and more, and has been shaping our eating habits for the last 50 years.

Bret: Yeah, so I mean, that's quite a circuitous approach, starting with terrorism and adding it at the process food industry, but as I'm reading your books, I'm thinking to myself, how did you get this access because this can't be information that the companies want out there.

They don't want us knowing how they're purposely manipulating our brain sensors and our craving. So I mean, how were you lucky enough to get access to all this inside data that they don't want public?

Michael: One of the things that became really lucky for me as a journalist, is that for many years, as obesity was rising in this country, none other than the largest tobacco company, Philip Morris, was also the single largest manufacturer of processed food, many of the biggest icons in the grocery store, through its acquisition of the old company, General Foods, and then Kraft, and then the Bisco.

And when the state attorneys general sued big tobacco, for the incredible public cost to the health trouble caused by smoking, part of the settlement, this was back in the late 1990s, was that the industry had to turn over millions of pages of documents, and put them in a publicly accessible, you know, accessible file website, basically, you can, you can go online and look at, and

what people didn't realize is that in the course of scooping up those documents, many of these emails, white papers, strategies, you know, conversational things, business analyses of the food division of Philip Morris got swept up in those documents.

So I was able to find those internal Records, which Philip Morris had never meant to be made public. And it was those documents that enabled me to sort of figure out what was going on. But then also identify key people who could then kind of call up on the phone and say, "Hey, I saw that memo you wrote, let's go... you know, would you mind if I came and spend some time with you? Because they want to get the fuller, bigger picture.

Bret: That's amazing. So it's just fortuitous that Philip Morris also happened to own the snack food companies that was able to make those documents public. So that's just a fascinating story about how you got that. And it really ties in this analogy between processed food and tobacco, which I think is a great analogy that you weave through your book.

But it brings up this concept of addiction, the word addiction, which wasn't really mentioned at all in your first book. In your first book, you really did a great job of showing how the industry is sort of stacking things against us. But in the second book, you really broached the topic of addiction. So what was it for you that made you sort of realize, well, actually, yes, these are, these can be considered addictive and we do need to start talking about it with that word in that language.

Michael: There were two things when salt, sugar fat came out. And you're right, I kind of avoided the a word. Being a little sceptical, I have to say, and sort of slightly buying the industry argument that like, okay, you know, we call our efforts to maximize the allure of our products snack-ability and crave-ability and more "ation" as one of the terms that they use. But addiction seemed a little harsh to me.

But one of the very first questions I got from news reporters was, Michael, you end Salt, Sugar, Fat on this positive note saying knowledge is power, and knowing what these companies are up to, can help us decide what to eat and how much, but isn't this stuff you're writing about addictive as drugs? And if that's the case, how can we possibly have any say in the matter?

And so that really got me thinking about that question of addiction. And then the second thing that happened is that, oddly enough, because I thought I had tormented them in Salt, Sugar, Fat as much as any company, Nestle, the single largest processed food company at the time, on the brand hot pockets, and I think in Salt, Sugar, Fat I call that a poster child for mindless eating, which is one of our problems, invited me to come talk to their private meeting of research and development directors.

I was intrigued and of course, I had to pay my own way being a journalist, but I wanted to go there and see what they were up to because this was about a year after Salt, Sugar, Fat. And after kind of giving them the cliff notes of the talk I was giving about the industry's culpability in our eating habits, in our over dependence on convenient foods, which Nestle said it was trying to turn the corner on and change its ways.

I spent time with their scientists who pressed upon me, you know, all the things they were doing to cut back on salt, sugar, fat, still retaining control the lower of their products. And I noticed that all the big companies were doing that. So I started to ask the question, okay, they're, you know, easing back on the things that I focused on in Salt, Sugar, Fat as being problematic for us.

And yet, if anything, our trouble with food has only gone up. I mean, even before the pandemic,

you know, we passed 42%, clinical obesity rate for adults in Northern America and type two diabetes appears to be growing and even gout etc.

Maybe there's something more about these products that isn't even on the label that you can't read in the ingredients, or the nutrition facts box that's making us so crazy for them, and so dependent on them. So that became the goal of the reporting. And the research I did for the next book Hooked, was looking at that question, what else is there about these products?

Bret: Yeah, so I want to get into the term addiction and what it means. But first, let's talk about some of those process food industry trades that you learned about, I mean, you mentioned things like mouthfeel, and bliss point, and, you know, the combination of the salt, sugar and fat in different areas.

And what are, I guess the take home for someone who's sitting at home listening and saying, I just can't put those potato chips down, I just can't put those processed foods snack foods down. And it must be a weakness on my part that I can't do it. So what's the take home from for them that they need to know?

Michael: So the take home is here is why you can't put those products down and B, it's not your fault. These products are so exquisitely engineered that they destroy, you know, willpower in us, our free will to make decisions. So if you're having trouble controlling those items, it's not you, it's the companies causing that. So let's take the potato chip, because that's frankly, one of my favorite products too.

And I confess, I'm one of those extremely fortunate people who can put their hand into a bag of chips and pull it out, eat a handful, put the bag away until tomorrow later in the week and not kind of think about it again. So I understand that so many people can't do that. And the reason you can't, goes into the engineering of the chips.

So first thing that touches your taste buds, when you put the potato chip in your mouth is salt, the industry calls that the flavor burst. The salt receptors in the taste buds will pick that up and send a signal to the reward center of the brain, which rewards us with feelings of pleasure for doing things the brain thinks is good for us, right? Um, potato chips are also heavy in added fats and oils.

There's a sort of a cornerstone or a hallmark of processed foods, snacks that says half of the calories should be coming from fats because that provides what the industry calls the mouthfeel of fats. It's that sensation, not a taste, but a sensation of biting into like a hot toasted cheese sandwich. And you can probably tell by my eyes lighting up that I'm more of a fat and salt kind of guy than a sugar.

But in this case, what it's picking up is it's picking up that mouthfeel through the trigeminal nerve, which comes down from the roof of the mouth, but also goes to the reward center of the brain causing us to love and want more of that.

And what I didn't know before spending time with nutritionists is that potato chips are pretty loaded with sugar as well in the form of simple potato starch, which gets converted into glucose in our body, which sends signals either in the mouth or the gut to the brain again, while this is something that the industry calls sugar, the bliss point when it gets the perfect amount of sweetness in products, add a little too much.

And one of the problems here is not that they've engineered things like potato chips with a bliss point for sweetness, if you will, they've marched around the grocery store adding sugar especially, but salt and fats also the things that didn't have those ingredients in them. So now bread as an engineered bliss point, um, for sugar with added sugar.

Some yogurts came to have as much sugar in them per serving as ice cream, spaghetti sauce, there were brands there that had the equivalent of a couple of Oreo cookies with sugar and so what that did was creating us kind of this expectancy, that everything should taste sweet.

So when you drag yourself over to that part of the store where every nutritionist says we should be spending more time the produce aisle right and try to get yourself or you know, help you more your kids to eat things like Brussels sprouts and broccoli and things that have sort of sour or bitter notes to it your brain or your family's is going to be rebelling.

Bret: Yeah, I think there's so many good points in there. And in that last one you made that the industry has sort of hijacked our taste buds, to make us expect sweet tastes. And that's one of the things that we see most often when getting someone to go to a sort of whole foods, lower carb type diet, is at first, they may have some of those cravings for the sweet food, it's hard to get rid of.

But over time, you can train your taste buds to not expect that just as we've been trained to expect it. So I think that's one element of hope. But the other thing is to go back on the way you describe the various ways that the companies engineer the food products, I guess, is not even really food, to hit our reward centers is it comes from multiple different areas.

I think that's so important. Like you talked about the tongue, the trigeminal nerve, the mouthfeel, the stomach, they really are hitting us from different areas, which only sort of heightens this allure, doesn't it?

Michael: Yeah, one, I just say that, I like to describe us as being infovores, because we love information almost for information sake, and the brain gets excited by information when it's different. So when you have something like the potato chips, sending signals through different ways to the reward center, I didn't even talk about the noise that a chip makes, because that's also a big factor in our decision whether to keep eating or not, the company is knowing that the more noise a chip makes, the more apt we are to eat more.

And so they spent a lot of time engineering noise into potato chips, sort of all of those factors coming in from different angles, will get the brain even more excited. And one more thing, which is a scientist, who was trained at McGill University, and then in Montreal, and now is at Yale, did this really amazing experiment recently where she looked at what the combination of sugar and fat does to the brain.

And what she found is that unlike eating something that's just sugary, or just fatty, which will excite the brain, when you have something in combination, like a chocolate chip cookie, the synergy, those two things working in tandem will sort of accentuate or rather excite the striatum part of the brain, which is associated with habit forming, right, which is kind of what we're talking about when we're talking about sort of, you know, our vulnerability to become addicted to these processed food products is a matter of variability to sort of get in our heads and cause us to form habits for eating those products.

Bret: Yeah, habits and memories, you spent a lot of time in your book talking about the impact

of memory and you brought up a pop tart example that when you saw and smelled the Pop Tarts, it brought back memories of you as a kid.

And I got to say, when I read that, my eyes lit up because it's so true. I mean, I used to go for... I was a long distance cyclist and my fuel for my bike rides would be just a couple Pop Tarts stuffed in the back of my jersey. And it would be such an enjoyment as I'm riding and enjoying the ride to then have this enjoyment of the Pop Tarts, and as soon as I read that part of your book, you're brought back memories. So they're not just focusing on our physiology, they're also focusing on our emotions and our memories, aren't they?

Michael: Yeah. So in Hooked I sort of realized from talking to scientists who used to study drug addiction, and now study food addiction, from crawling back into the underbelly of the processed food companies to look at the scientists who are helping them protect their foods.

And then also spending time with evolutionary biologists, you know, came to realize... and in fact, as one scientist was Dana Small, sort of pushed back a bit on the addiction thing by saying, look, Michael, it's not so much that food is addictive, is that we, by nature, are drawn to eating, even over eating.

And for most of our existence, that was a really good thing. But the problem is that the companies have changed the nature of our food really dramatically, in a way to make overeating an everyday thing. So one of our instincts is to like food that's inexpensive. It meant less energy expenditure in hunter gatherer societies. It just made sense. Instead of trying to run down, you know, an antelope for dinner, you just grab that aardvark that's sitting there and eat that.

So knowing that the brain gets excited by inexpensive food, the companies use chemical laboratories called flavor houses, which produce kind of those wondrous chemical brews called pumpkin pies spice, again added all kinds of products from the grocery store in the fall, but also to drive down the cost of the ingredients, knowing that we'll get excited by a box of, you know, breakfast toaster pastries that got me so excited to be back to my latchkey kid, when I smelled one recently at the Kellogg's factory, knowing that we'll get more excited about that, if the cost like 10 cents less than it was.

So cheap, this is one thing we're drawn to. And they tap into. Variability, you know, we evolved to look for different kinds of food. And the conjecture is, you know, that was because we knew, or we came to realize that we would be stronger eating different kinds of food, because we'll be more apt to get sort of all the nutrients that we needed when we're living in the wilderness, right?

And so not having total control of our diet. And so we're drawn toward food, it's highly variable. So what are the food companies do that's why you walk into the cereal aisle, and there are 200 versions of sugary starch there waiting for you, knowing that the brand gets excited about that.

And maybe the third way that they tap into, not using additives, but our own kind of basic instincts, is calories. I didn't know but we have sensors in our gut, possibly even in our mouth, that tell the brain how many calories there are in the food or the drink that we're eating.

And the brain gets more excited, we know from recent experiments, the more calories there are in the food. And again, this made perfect sense, right for most of our existence, because getting food that had more calories meant we were able to put on more body fat and more body fat meant that our brains could grow.

And we could get through lean times. And we could have more babies, right? Well dial forward to today, the last two years, And what you have are these companies who are packing in sort of nutritionally empty calories into specially their snack products. And these excite the brain in kind of the same way, calories always have, to the detriment of kind of our ability to kind of put the stop on things, saying, wait a minute, you know, is it really good to be eating this entire bag of Fritos, given that it has like almost a full day's worth of calories?

Bret: Yeah, a very good summary of the different ways it affects us. And from an evolutionary standpoint. They've not just hijacked our biology, but they've hijacked our evolution and capitalized on it. So one of the questions then is, well, are these just evil people trying to make us sick? And should they be held culpable for that as an industry? Or does everybody know what's good and bad for them?

Everybody makes their own choices, and they're just brilliant marketers and brilliant scientists, and they're not really trying to make us sick. They're just trying to maximize their profits. How do you see those two sort of competing theories?

Michael: So I opened the book with the story of Jasmine Bradley, who was one of the two teenagers in New York City, who sued McDonald's back in the early 2000s for making them obese, over eat. And they kind of got laughed at by the media, and certainly, you know, they got creamed in the court with their lawsuit. Ultimately, it wasn't successful.

But one of the elements in that case really intrigued the federal judge who was handling the case. And that was the charge that they made that these foods were addictive, because basically looked at and said, well, if that's true, if these foods have some hidden element, that we don't sort of fully understand what it is and how it works, then that would put a whole new spin on personal responsibility.

Because I think even up until this point in time juries... you know, being presented with a food case of overeating against the food industry, is going to be a little more cautious about holding them accountable, as compared to the tobacco industry, because of that kind of sense that food, you know, we still have sort of this large amount of personal responsibility, and everybody knows that over eating at a fast food restaurant is going to cause your health trouble.

But the addiction factor to this and the ways that these foods are in many ways even more troublesome than cigarettes, alcohol and drugs, I think could tip the scales. **Bret:** Yeah, I mean, it's also the concept we have to eat, right? We don't have to smoke. We don't have to do drugs. People can choose to those but we have to make decisions about what we eat on a daily basis.

And if we are being bombarded with detrimental and addictive products and marketing for that, you could see there could be a way to culpability, but it really is a slippery slope to say that and all I think comes down to the definition of addiction, the legal definition of definition, definition of addiction, sort of the personal definition in the clinical... what does it mean, for people?

Michael: One of the big push backs I got from the processed food industry was, you know, how can anybody call our products addictive? If you don't have like, painful withdrawal, like you're doing some narcotics or, you know, you don't have a tolerance, change and tolerance, you have to eat more and more of it to get the same pleasure that you did previously, and on and on well... so I had to go back in time and look at how experts have defined addiction.

And sure enough, if you go back a few decades, people looking at drug addiction had some cri-

teria that certainly wouldn't fit many aspects of these food products we're writing about, including people withdrawal. But over time, they came to realize that not all drugs, will cause painful withdrawal symptoms, nor will all drugs, illicit drugs that people are becoming addicted to cause things like needing a higher or lower tolerance or needing more of a drug for the same kind of reward, feeling of pleasure.

And so experts who worked in the field of addiction, became broadening the definition out, dropping some of those kind of various specific criteria. But the real eye opener for me, came when I ran across some legal proceedings with... in which none other than the head of Philip Morris in the year 2000 was being asked how he defined addiction.

He said, addiction is a repetitive behavior that some people find difficult to quit. And that was such an eye opener for me, because A, Philip Morris is arguably, you know, an expert on addictive behavior when it comes to substances like cigarettes. But at the time in 2000, it was also the largest manufacturer of processed foods in North America.

And so, you know, knowing what he spoke of, that definition, especially that some people... I thought it was entirely fitting to many of the company's biggest products in the grocery store, because one of the characteristics of addiction is that not everybody gets tripped up, not everybody becomes vulnerable to these substances.

There are people who can smoke casually, infrequently, there are people who can drink moderately, there are... and don't get me wrong, I'm not encouraging anybody to do this. But there are people who use heroin casually, without harmful effect that we would associate with addiction. And I think that's just really important to understand. The other pushback I got from the industry is, you know, how can you call our products addictive?

Because not everybody loses control over hot pockets or Lunchables or a bag of potato chips? All the reason is because not everybody, at all times of their lives are, you know, are vulnerable in a way that makes them lose control.

Bret: Yeah. And I mean, that's such a good explanation, but also very troubling explanation. But if you go back to that definition, it's so simplistic, repetitive behavior that some people have trouble quitting just, it's so simplistic, and it almost makes me think, like, if we make it that loose, then everything's addictive.

And if everything's addictive, then nothing's addictive, right? Is there somewhere there's that like, slippery slope and here's why it matters, though. I mean, when it comes to like you, as an individual, any of our listeners, as an individual, as a clinician dealing with an individual, you can understand when things have addictive tendencies and need behavioral interventions to address those addictive tendencies.

It's very different if you're trying to say this is an industry that needs to be regulated, that is causing $300 billion versus of healthcare expenditure every year. And therefore, we need to put taxes and regulations, which is obviously a slippery slope, but that I think, would require a much more stringent definition, or do you think a loose definition like this could still fit?

Michael: No, I think it's kind of... you can apply different definitions, different shades of that definition to different aspects, whether you're trying to help someone in a clinical setting, deal with eating disorders.

And there are people who have come up with other sort of criteria to look at, to define whether people are absolutely kind of horribly out of control with their eating habits, which by the way, seems to apply to 15% of the population at that end of the spectrum, or whether you're just kind of describing the loss of control that in the trouble that many of us have having fallen so hard for convenience foods, and just kind of missing the love and the beauty of home cooked meals that are enjoyed slowly with family and friends.

So I think again, it's going to comes back to the spectrum of kind of where you are, where people are, what aspect of the trouble you're dealing with in terms of either changing your own values in food, or holding these companies accountable for having spent in the last 50 years, trying to dictate to us what we should value in their products.

Bret: Yeah. And so now we're sort of transitioning into what we can do about it. So there's sort of what we can do about it from a personal level, and then what we can do about it from a societal level. So I think, let's take the societal level first, because I think it's a little more complicated, because then it does rely on sort of definitions and taxes and government interventions... And do you think there's any hope for that?

Because I mean, look, again, we could go with the tobacco industry analogy, it's probably similar economic impact and health impact. And there's no question that it's, you know, dangerous and harmful, but it's still legal.

I mean, we have restrictions around it, we have taxes and so forth. But the lobbying in the industry is so strong. I mean, if you were an outsider, and you would... you should be able to look at this and say, there's no way these things that cause cancer and heart disease and are unnecessary, should be legal.

But yet we haven't, and probably never will take that step for so many reasons. Do you see the processed food industry the same way? Well, I think people have studied our tobacco consumption, agree that the sort of single biggest factor in getting people to dramatically reduce their smoking rates was the taxes put on products, because look, I mean, we love money as much as we love cheap food, right?

And so, you know, just a little bit of tax on things like sugary drinks has been shown in the few places where it's tried have like a significant nudge effect in kind of like, pushing people toward better, better decisions. And you can almost see parents shopping in the store with their kids and the kids wanting the soda and the parents going, "Okay, you want to pay for that with your allowance? Because there's a tax on that now."

The kid going, oh, wait a minute, right. So who, you know, that seems to be kind of one approach from a government society level that maybe can have some consequence. I mean, the thing that got big tobacco, you know, brought it to its knees with what was the litigation by the state attorneys general, which went after it not on the grounds that smoking is bad, evil, but on the grounds that they were having to foot the bill for the tremendous hidden cost in smoking their health care, right?

And so as a matter of settling, that huge case, they not only extracted gazzilions from the tobacco industry, but they got them to pledge reforms that maybe helped reduce our dependency on cigarettes as well, including sort of their marketing strategy to the younger people.

And I was really interested when I came across a former corporate attorney at Kraft, who came up

with a similar strategy for going after big food, that you would sue big food, not because they're making food that's bad for us and causing health troubles.

But to recover those healthcare costs instead of as part of that sort of litigation, then you would work on marketing and formulating formulation and reforms that could help us kind of regain control of our products.

Bret: So where does that stand? I mean, does that have any--?

Michael: Yes, you had to ask that question. So he came up with this brilliant proposal, very detailed, sent it to 17 of the most likely state attorneys around the country. And you heard back from... zippo, none of them.

And his sense is that you know, these huge issues that we grapple with kind of ebb and flow over time that maybe it just wasn't the right time to sort of catch everybody's attention in looking at these food products, and the end the huge influence they have on our health and our habits and our enjoyment of life.

I think there's something else going on here too, which the companies have spent so much energy convincing us that their products are cute, and laughable and fun, that you can hardly imagine there being, you know, a big march down the street of people protesting Oreo cookies, or Twinkies, because it just kind of still seems silly.

But I would argue that perception is coming from the industry through their 50 years plus of marketing to us and getting in our heads and associating their products with pleasant fun memories. That it's really hard to kind of turn around now and see these products for what they really are.

Bret: Truly is a brilliant marketing for sure. So one thing to circle back on, though, you mentioned about the sugar tax or the tax on the cheap, high sugar, high fat, highly processed food that could be an option. But it's almost like you need both the stick and the carrot, because it... carrot quite figuratively, because if you're taking that cheap food away, the Hot Pockets which, you know, when the parents aren't home, the kid can just put in the microwave and you've got cheap calories right there.

If you don't have a substitute for that, then you're really going to harm the people in the lower socio economic status who will just be starving for calories, then they're already starving for nutrients, but then they'll be starving for calories. So that's where if the government is to take action with a stick, it needs to provide a benefit too to make healthier food cheaper as well. Do you see those two priorities? Are those goals ever aligning? Or are they so disjointed that they may not happen?

Michael: Well, I don't know. I mean, the causes of obesity are, for example, as a crude measure of our losing control and falling so hard for convenience, which is so complicated, that I often thought if I was like king for a day, I'd want to take one zip code in a city, right?

Could you 10 things all at once to kind of change, help people change the way they value food. And of course, you'd start with that garden, in the elementary school to get kids excited about things like radishes, and then then you'd go to the supermarket and look at how their marketing strategy can get parents excited about radishes, and able to buy, you know, buy those radishes and not spend as much on that as they do a two pound three cheese four meat frozen pizza, it's gonna feed the whole family, then suddenly looking at kind of the whole agriculture system, and

how so much of the research and develop money goes into the kind of those two core ingredients and ultra processed foods field corn, and soybeans, and how little goes into making things like broccoli, kind of more accessible and affordable and the likeable to people.

And so I've touched on three things, and there's going to be like seven more that you'd want to work on synergistically kind of all at once. But maybe the most important is working on the kids. I mean, I would love to see Home Economics brought back into schools, right?

I mean, back in the day, girls, but also to some extent, boys, were taught to be mindful of food, how to plan shop, prepare food, and that fell by the wayside and the 1980s as other society, prompt societal problems caused us to sort of turn our attention to those like teenage pregnancy or helping kids get a job when they graduated from high school.

But I'd love to see Home Economics come back and taught not in a preachy kind of way where eating your vegetables is good for you. And so you need to do it. Because we don't really respond to that whether we're kids or adults, right? The government has been telling us to eat more vegetables, for decades, and the consumption rate of anything has gone down, right, but more sort of having a conversation food, and teaching food almost in the sense of the political sense of food.

And by that I mean, you know, this decision that we have, which is do we want to let these multinational corporations continue dictating to us what we should value in, for, you know, the immediate gratification the yumminess, since now sensations, or do we want to tell?

Or do we want to set those values for itself, you know, and walk into a Starbucks and see the pastry counter and go, okay, that's gonna be yummy, but how am I going to look sitting on the doctor's table three or four years from now when he's looking at my heart, and trouble caused by my diet and habits, eating habits?

Or even something... so like, how am I going to look in a bathing suit the next number, so that's the basic choice that I think kids especially really can respond to and engage in a sort of that conversation about, you know, do you want to be making your own decisions? Or do you really want these companies making those decisions for you?

Bret: And some of that comes back to this question again of addiction. So things for instance, things like now having to list the number of calories and be more transparent about calories, fat, carbs, to that have any impact at all on people's decisions or is it just come down to the biology, the addictive tendencies, the wanting more that just makes us gloss over not pay attention to those at least that one attempt at an intervention to slow things down with the labeling?

Michael: I'm sure there are people who can look at the nutrition facts box on packages, and go, okay, this is like, way too many calories that I need for this kind of a product at this point in my life or a time of the day. Or, you know, way too much sugar. And so yes, that information can be helpful.

But I was really surprised to learn that the invention of the nutrition facts box on packages came from none other than the food industry, feeling pressure from the consumer advocate Ralph Nader... if you recall, he was on the cover of Time Magazine, I think it was, being really concerned about the unknown additives going into meat products and other processes. This was before labeling.

And in response to the growing public alarm about that, the food companies themselves suggested, why don't we just tell everybody what's in these products. And the upshot of that goes back to sort of us being infovores, liking information for information sake, is when we see that jumble of data, you know, percentages and grams and stuff that I can't make sense of in my day to day diet needs, eating habits. People will just feel placated and be put at ease, thinking well, the government, you know, is in charge here, and put all this information there.

And they're always like standards isn't, it must be okay. And if anything, one of the lessons that I've learned from kind of crawling through the underbelly of this trillion dollar cartel, if you will, called the processed food industry, is that they're really good at changing their formulas to respond to our concerns about specific additives or ingredients.

And you can almost see this over time, you know, when we became concerned about sugar, they would cut back on sugar a bit, change the name of sugar, so there's now more than 60 things on labels that are sugar, but they go by different names, including things like concentrated fruit juice, They do that by increasing the amount of salt, sugar, fat, but keeping the lower this number.

Then when we became concerned about fats, they would reduce certain types of fats, and then increase the sugar and the salt. So they're really good at nutritionalism, if you will, kind of portraying their products, as these nutrition components, which at the end of the day, I think should still have us asking the question, but is this real food that's going to make me strong and healthy? And the answer to that question can't necessarily be found on these product labels.

Bret: Yeah, so I mean, after going through this, going through so much of what this industry has in their toolkit to control us and to control our behavior, are you optimistic that we as a society can overcome this and improve our health as a means of overcoming it?

Michael: What's really tough, I mean, more and more people are caring about what they're eating. And that actually translated into a remarkable moment. It was 2015, in Florida, where the heads of the biggest companies got together to meet publicly with investors from Wall Street.

And one after another of the company executives confessed that they were losing the trust of their customers, sales of the junkier stuff in the store were going down, because people were starting to act on their growing concern about what they were putting in their bodies. And that certainly gave me a moment of hope that this industry, you know, could and will sell us things that are good for us.

As willingly as they sell us things that aren't so good for us, if only they can make money kind of doing that. But dial forward. And I have to say that there was kind of more bad news. And you can look just as I do with what kind of the steps the industry has taken to kind of deal with our growing alarm that these products, in fact, have an addictive element to them.

So one of the things that they've done is added that wonder kid of nutritionalism now protein, you know, which in some circumstances in some diets may have a satiating effect, allowing us to feel fuller faster, that can maybe help us eat less at the end of the day. They're doing things like adding, you know, grams of protein, extra grams of protein to sugary cereal, right?

Losing completely if it's sort of context and other proteins being added. Fiber is another aspect of kind of whole vegetables that nutritionists scientists think maybe it's kind of the mystery ingredient in those that help us slow down our eating feel fuller, faster, but in response to sort of that a little bit of knowledge, the food companies have been adding a couple of dozen versions

of fiber to their products, which let them jack up the number of grams of fiber on the back of the package.

But by and large, the research that has been done on those fibers, some of which were created in the laboratory, they're artificial. By and large, that research shows that they don't have any satiating effect, they don't make you or at least there's no evidence that they cause people to feel fuller. So those are kind of two ways that they've not only kind of exploited our natural biology that causes us to want to overeat. But they're also exploiting our eagerness to kind of change our own eating habits.

Bret: Yeah, I think protein and fiber are two great examples. But like you said, the whole food version of it is very different from the processed food version of it. One of the benefits of fiber containing foods, is they have a lot of bulk and a lot of water and they take up stomach room, but that part completely goes away when you're just adding it to the processed foods.

And similar with real food protein comes with other nutrients, and also usually kind of bulky satiating food, but again, does that completely go away when you mix in a lab with salt, sugar, fat, and so it's kind of not the same, but their marketing may make it seem like it's the same because we know we need protein, we under eat protein as a country, probably, as a society. So here's a way to get more.

And it's great marketing, but it doesn't translate to health. So whenever you have this intersection of marketing and health and the downstream effects, I mean, it's sort of screams for some need for regulation, but regulation that we're not seeing, and I don't know, I guess I'm not optimistic that we will see it. So it does come down to public knowledge, individual choices, getting as much information out there as possible, getting it taught in school to the kids.

So if someone was going to say, what can I do today to help? I mean, should they start at their local school? Should they start with their local politicians, they can vote with their pocketbook? Or what do you tell people to do to really make an impact today?

Michael: I think you would start on those 10 things, whichever one of those sort of, you know, drew your interest the most, if you're somebody who could help organize a garden in your school, or knows, you know, a gardener who could get kids excited, because a lot of it comes down to the person handling those radishes and the broccoli rabe, kids get excited about that, then that's kind of where you want to pay attention.

If you're just dealing with your own trouble, it also is going to depend where you are on that spectrum. And one of the lessons from the world of drug addiction is that cravings can come on so strong that they completely wipe out our ability to sort of execute, willpower, if you will, they destroy free will in this matter.

And so one of the lessons from drugs is that if you're the kind of person who gets a craving for cookies at 3pm in the afternoon, kind of no matter what your strategy is, whether it's to stand up and stretch, or call a friend or eat something better for you like a handful of nuts, hoping that will tide you over till dinner, which for a lot of people It seems to do.

You need to be doing that, executing that strategy at 2:55, in order to ward off that 3 pm craving, or you're not going to be able to do it. And again, the lesson here from the world of other addictive substances, it's not your fault. It's not a lack of willpower or your fault. It's the exquisite engineering that goes into this products in a way that's designed to sort of send our brain into

overdrive and cause the top part of the brain to fall asleep.

Bret: Yeah, well, I certainly agree that knowledge is power. It's not everything, but it's certainly a power and a good place to start. And in both your books really help lay the groundwork and really help educate people about what is going on.

And for those who don't know, I mean, it's completely eye opening, if you haven't heard about this before, so definitely worth reading those books because it can, knowing that can help you realize is not your fault, help you realize there are steps you can take to improve your health. So what do you see as the next step in general? And what's the next step for you to go from here?

Michael: So I think in general, I think the next step is just to sort of help more people kind of see behind the tricks that the food giants are playing and sort of understand why it is they're losing control? And again, in a way that now shifts the blame and responsibility from them to the food companies and in what I think is a real sort of justified way. I mean, me I'm continuing to speak about both of my books, Hooked especially when the pandemic ends.

I'm really looking forward to going back on the stage in front of a live audience where you can connect more easily to people. And I think when Salt, Sugar, Fat came out, I gave upwards of three dozen public talks and, you know, big schools, little schools too, companies, organizations.

So I'm going to continue spreading the word about what I've discovered in this whole area as a journalist.

Bret: Yeah. And so where can people go to learn more about your books and about your message?

Michael: Yeah, so I have a website. It's called mossbooks.us, that's mossbooks.us. And the books are there, places to buy the books are there, whether you're like Amazon or indie bookstores, I'm also kind of keeping track of the great interviews I'm doing like this one and so people can kind of catch up. I think since Hooked came out, I'm up to 80 interviews now, some of them with big TV channels and radio stations, but also really terrific podcasts like yourself so people can follow along.

And last but not least, my email is there so they can reach out to me, I'm really delighted to get messages from people and I'll respond as quickly as I can.

Bret: Well, that's great. I mean, I really hope people take notice because this is important information that people need to know whether the word addiction applies or not, it still applies so personally to people, and they need to have the knowledge so that they can take the steps to improve. So thank you for all your work, and thank you for joining us today on the Diet Doctor podcast.

Michael: Thanks for having me.