Jonathan: Hey, everyone, Jonathan Bailor back and I am thrilled about today’s show because we have a fellow geek with us. I love it, I love it. She is just an absolute gem personally and professionally, incredibly impressive and enlightened and insightful.

She is the author of Foodist and is a PhD and she is also the creator of this fabulous website, which is you have not checked out you need to check out, it’s called Summer Tomato. It is as beautiful as it is informative and maybe that’s actually a good way to describe the guest, as beautiful as she is informative.

Darya Rose, welcome.

Darya: Aww, shucks.

Jonathan: Darya, I had to bring you in as part of this seminar because we’re here to help people understand that just like we don’t use the same airplanes we used 40 years ago and don’t use the same cell phones we used four minutes ago, we don’t need to use the
same calories in, calories out, just eat less, exercise more oversimplification dogma of 40 years ago. We can leverage modern science to help us eat smarter and live better.

Foodist does that so well, but can you tell us first a little bit about your personal story, maybe living in the old world and how you transitioned into the modern, scientific world?

Darya: Absolutely, I’ve never thought about it that way but I think that’s very accurate. I grew up in southern California in the ‘90s. I was 11 years old, sadly, the first time I had a Slim Fast shake. I was in sixth grade, I came into the kitchen, my mom was making chocolate milkshakes and I was like, “Yes, chocolate milkshakes for breakfast. That sounds amazing.” That quickly devolved into having it every day and becoming as a young woman very self-conscious, worried about my weight.

I switched to grapefruits, then from there I switched to nothing. I stopped eating breakfast for a long time. Basically, I did all the diets. I did the low fat, I did the low carb, I did the South Beach. I was running marathons for funsies and to burn extra calories.

Jonathan: For fun?

Darya: Yes, right, I don’t recommend it. Michael Pollan has this fabulous quote in In Defense of Food when he talks about the national eating disorder, because we all went on this diet roller coaster. It was all basically based on eating less, restriction and cutting things out of your life.

Needless to say, I was miserable. They didn’t really work. They all work, I guess that’s the first lesson. They all work for a short period of time, but who wants to be thin for a short period of time? Then what happens after that, of course as we all know now, is you end up gaining weight over time.

I had gone through that and became very frustrated. The second part of my life, I was studying science and I was studying molecular biology at Berkeley and then I went and did my PhD in
neuroscience. At some point I was so fed up and I was starving myself and wasn't really getting the results I wanted and realized, you know what? I'm a scientist now, I'm going to go to the data instead of going to like the bookstore or the glossy magazine section, and figure this out.

I came to realize a few things that I didn't expect. The first one was I was looking for the perfect diet. What I learned was that diets don't work. I guess I kind of knew this. Intuitively that was my experience but when you've been dieting for 15 years this is sort of bad news. You're like, “Dang it, I thought I was doing the right thing all along.” It turns out that's not true.

What was more important was patterns of food you eat, macronutrients per se, carbs, protein, fat not as important as I expected it to be. Also, that thin, healthy people eat. They eat. They eat carbs, they eat meat, they eat fat, they eat all these things that I had been spending my entire life hating and avoiding.

When you ask what brought me around to modern science, it was actually I read the data, it was there in front of me. I like to say a leap of science, for me it really was. It was scary and it did feel like a leap of faith, to some extent. I'm like I have to start eating breakfast, I have to start eating grains or beans, eating a more balanced diet. To me I was like, “How is this going to do anything but make me gain weight?”

I knew I could always go back to starving myself or back to the cabbage soup. I tried it and I really, really did expect to gain weight. Two weeks went by, three weeks went by, I didn't gain weight. I was eating more than I'd ever eaten in my entire life since I was like ten.

Slowly but steadily my weight started going down and it didn't stop. It went down slowly but for years. Ultimately now I'm around five or seven pounds under my original goal weight and have maintained it so easily. I never fluctuate more than three
pounds in any direction and it's always stress based. It's so easy for me to just regulate without even really trying.

Like you mentioned, I'm not counting calories, loving food for the first time in my life. I realized that I hated it at one point. I was in college and it was just like this horrible, stressful thing for me, food. I got over that and my life's never been better. I think we have the same mission here, which is to dispel the myth of dieting and calorie restriction and get people on the right track to actually eating real food and enjoying real food, because I think that's key, and being a healthy person that way.

Jonathan: Darya, you are such a great person to talk with about this because you embody not only from a personal perspective going through this but as a neurobiologist. Don't take this the wrong way, but you're obviously so smart and you've been smart your whole life. I would imagine you now see this is obvious, food is not evil, we're meant to be satisfied, hunger isn't healthy.

I'm a senior program manager at Microsoft. There's big Mensas, these people are geniuses. You're a genius. It's like these simple truths escape us. How can people who are so intelligent kind of miss these things?

Darya: I think we over science ourselves. I think we create something of an illusion where we think this has got to be a formula. We love math, we love to have a paradigm. Calories in, calories out is so simple.

I don't think it's entirely untrue. You can definitely lose weight by counting calories. Scientists will do an experiment, have people restrict their calories for a few weeks. Then they'll lose weight and be like, “Ah, problem solved.” We don't take into account the nuances of actually being human.

The issue for most people is not the fact that we could strap people down and starve them if we wanted. We have to live and make choices for ourselves every single day.
In my experience with my readers, that is the hard part. They know broccoli is better for you than cheesecake. People know that. We know that cookies aren't good. That doesn't stop us from eating them. They're tasty.

What I've really come around to is that psychology is one of the biggest factors here. I don't think doctors and scientists like to think that because psychology is messy. It's very squishy in terms of science. It's hard to nail down what motivates someone in the morning versus what motivates someone in the evening versus the weekend. It's a very complicated thing that we would rather not think about.

I think we have to think about that and address that topic if people really want to make meaningful changes to their health.

Jonathan: Darya, I love this. One of the things that I love most about your work in Foodist was you were talking about these choices, the psychology. Especially people often talk about they eat emotionally in the evening. You give a great explanation which is sciencey as to that might not be because you're weak, it might be because you're human. Instead of thinking you're weak and flawed in some way, we just need to understand our wiring and eat accordingly.

Darya: Absolutely. The willpower myth is probably what holds most people back. There's a lot of psychological issues at work with choosing what you eat, but for most people who've been on this dieting roller coaster, which is everyone, almost everybody believes that if they want to be healthier they have to use willpower, restrict their eating in some way.

That model is so flawed. The first step in getting past it is really understanding deeply that it will never, ever work. Here's why. Basically we tend to think of willpower as a switch, or some well that we have deep inside. If we can just reach and grab and pull it out then we will succeed. No pain, no gain.
What people often fail to recognize is it actually works more like a muscle. It’s super strong when it’s rested. Almost everybody has good willpower when it’s not taxed. Like a muscle, it becomes fatigued when it’s overused. It’s not just restricting eating that uses up willpower, it’s every difficult decision you make throughout the day.

Sleep deprivation will kill it, small children running around screaming will tap your willpower. Who doesn’t have a demanding job? Who gets all the sleep they need every night? There’s no human on Earth, or maybe there’s a couple, most of us don’t fit in this category where our lives are so simple that we can just have willpower whenever we want it.

You have to plan for the fact that by the end of the day you’re going to be tapped. If you’re relying on willpower you’re setting yourself up for failure. It’s even harder with dieting because one of the only things that can actually restore willpower is blood sugar. If you’re starving yourself guess who’s low on blood sugar? It’s this catch 22. The best thing to do is to stop relying on willpower and instead take a completely different tactic psychologically and work on building habits. That’s what I try to help people do.

Jonathan: I want to get into those habits, strategies. Darya, I want to see if maybe I’m taking this too far. You are the expert here. I sometimes think that telling someone to eat less, to lose weight, is a bit like telling someone to sleep less or go to the bathroom less in an effort to cure a condition.

Not only, to your point, is it hard from a willpower perspective, but the body will actively fight you from malnourishing it. It’s even harder than let’s say learning the piano because your body is not like driving you innately to not. Is there kind of a one-two punch going on there?

Darya: Yes, so we have very strong mechanisms in our body to keep us alive. They’re homeostatic mechanisms that maintain our weight,
our energy balance, all these things. Obviously food is our number one priority for survival.

Our body kind of goes nuts when we try to not eat. The willpower thing is one thing. Your metabolism slows down for sure, that's another thing. Also, you start triggering ridiculous psychological behaviors.

Basically, as a dieter you teach yourself to not pay attention to when you're hungry. That's the goal. When you're dieting you're like, “I'm going to be hungry and that's good.” The problem, though, is that for some reason and I haven't read a good scientific explanation as to why it works this way, but when you do that you also teach yourself to stop paying attention when you're full.

That is a big problem because what dieters will do is when they break their diet, which is inevitable because willpower doesn't work forever, they overeat like crazy and they overeat more than a non-dieter, somebody who never dieted at all would ever have eaten.

There's no point in even trying. You're actually sabotaging yourself by trying this tactic. It's really, really bad. Like you're saying, it makes it harder than it needs to be to lose weight. Losing weight shouldn't be that tough.

Jonathan: Darya, you mentioned that the first step we need to take is to understand that this can never work. Can we globalization that and just say that if we try to make any sort of change in our life, it's not that it needs to be easy but if it's like we have to fight tooth and nail to do it are we doomed to fail?

There are people, for example, that do learn to play the piano, which I could imagine at some point in time just takes willpower but people break through that willpower barrier. How do we cross the willpower chasm, if that makes any sense?
Darya: I think there’s an important distinction in types of tasks. Obviously, willpower is very effective. People with stronger willpower, and there are people with stronger willpower, do better at school, do better at work, have better relationships with their family and friends. They succeed in a lot of other parts in their lives.

It’s tough, like I said, for food. Food’s a special case because you have that blood sugar issue. Also, think about money. I think money and food kind of go in the same category in some sense.

Who has the willpower to be like, “I’m going to just spend my money, try to be frugal and whatever’s leftover at the end of the money I’ll just stick that in my savings account.” No, if you want to save you automatically deduct it at the beginning when you get your paycheck. You have one go to taxes and one go to your savings account. That’s the only way to succeed.

One of the reasons for that, I think, is things like money and food it’s not like you sit down at one time during the day and practice, like piano. That you can use willpower for. These are small, tiny decisions that you make dozens of times a day. Dozens of times a day.

The way our brains work is we can’t calculate every single time. What we start doing is we start relying on habits. That’s why I think there’s certain parts of your life that because you do them so often you need to take this habit-based approach and not just like I’m a warrior and I’m going to will my way through this to success. It just doesn’t work for things like money and food.

Jonathan: Using your analogy of willpower being more like a muscle, it seems if it’s a finite resource we’re dealing with why would we want to spend it on food when we could go learn the piano instead or learn a language or live a great life?

Darya: Totally. Especially since it doesn’t work. You’re wasting willpower that you could be using on other things. That’s true. If you don’t
have the willpower to make dinner at night you certainly don’t have the willpower to sit down and learn Japanese after work.

If you can learn to automate all these actions so that you’re healthy by default, like on autopilot, just like your money. Your money, you just save on autopilot. That’s when you win, that’s when you get over this.

Jonathan: You’ve got this automatic savings plan for money. What is our automatic satisfaction plan for food?

Darya: This is the tough part. I like to use a word called the home court habits. You know the 80-20 principle?

Jonathan: Yes.

Darya: For most things you think you have this sort of one-to-one relationship with effort and success, but really for most things 20 percent of your energy is going to create 80 percent of your benefits. Right? They’re big wins.

What I like to do is find those in my daily life, those big win habits, and just stick to those like no matter what. Especially when you’re in your home, when you’re in your normal routine. If you’re traveling, if it’s the holidays, things can get a little out of whack. When you get home if you can get back on your home court habits then that’s basically like your savings plan.

Big wins. Breakfast, a healthy breakfast is pretty tasty compared to some other meals that might not be so healthy, or that can be tasty and not be healthy. Oatmeal is delicious, eggs are delicious, it’s not that hard. They take two minutes. Breakfast takes two minutes. Guess what? If you can manage to get a healthy breakfast in six to seven days a week, 30 percent of your meals are healthy. Done, big win.

Same thing with cooking dinner. It’s really hard to eat healthy when you go out. It’s possible. If you can get in the habit of
cooking at home on week nights or three or four nights a week, huge win, huge win.

Walking 10,000 steps a day, another huge win because even if it's tough for you to go to the gym or something like that, 10,000 steps a day breaks that sedentary behavior and burns those extra calories that actually don't make you hungry. That sort of activity doesn't increase hunger like going to the gym will.

There's several more. Chewing. Something nobody does, it's amazing. Next time you go to a restaurant, just put your fork down for 20 seconds and watch everyone chew, or not chew. It's shocking. If you can build the habit of chewing your food 25 times you’ll naturally enjoy it more and eat less of it.

There's all these amazing home court habits that I think if you can figure out what they are for you, and yours might be different from mine because we all have different life circumstances. If you can get those down then you know that no matter what life throws at you, you can get back on track.

Jonathan: Darya, have you found that some of these lifestyles, let's say a vegan lifestyle or a paleo lifestyle or a low-carb lifestyle, it seems like built into some of those lifestyles are habits which may be part of their success. Or I guess what would you ascribe their success to if you feel they are in any way, shape or form successful?

Darya: You're naming fairly healthy eating plans. A vegan that's health conscious, a paleo person, they're probably going to be eating multiple orders of magnitude better than your standard American diet. If something's working for someone I don't ever tell them to change unless they want to.

I think something different are at play for those sorts of lifestyle diets. I think there's a level of values that comes into play. I don't think you use willpower. If you believe that eating animals is as bad as eating people, if that's what you believe it's not a question of willpower anymore. They're not relying on willpower.
It may seem restrictive to us, but from their perspective it doesn’t feel restrictive because it’s not requiring that willpower. I think if that is the way you manage to get yourself off the willpower bandwagon and onto a lifestyle, habit-based bandwagon, you win, that’s great.

Jonathan: As a neurobiologist, I’m curious. Vegans and vegetarians have always been interesting to me because they do something which seems like would require a lot of willpower without willpower. What you’re hitting on here is that’s because they’re doing it for a more moral or noble cause.

Let’s say sugar, for example. It’s not hard for parents to not give their children cigarettes because they know that giving their kids cigarettes is really, really, really bad for them and addictive and can cause permanent damage. They’re doing it for maybe another reason.

Is there any level of that we could bring into the food arena to help make this less of a willpower thing and more of a if we're all diabetic our country will collapse?

Darya: Yes, absolutely. I think any way - there is this great study and I think it was brilliantly designed, done by a professor at Stanford. What he tested was he had several groups of students and they were in classes, different classes. He gave them questionnaires on their eating habits before the class and then ran them through the class and then questioned their eating habits after.

Three of the classes were health based, like a nutrition class, like how do you eat to be healthy. They focused very much on health, diet, nutrition, weight loss, things like that. The experimental class was a values in society class where food was a part of it but they talked about how it affects the ecology, how it affects the humane treatment of animals, antibiotic resistance that happens in big, factory farms.
What was really amazing about this was that the students in the value-based class had much better improved eating habits at the end of the class than any of the students that went through the health-based ones. In fact, the students that were in the health-based class ended up eating less vegetables afterwards. They didn’t have a hypothesis for why, but obviously they didn’t improve. The habits that were developed for the kids in the value-based class lasted another six months. It was a sustainable, long-term improvement because they cared about values and not health, per se.

I think if we really want to tap into the power of that we need to educate ourselves more. I think one of the brilliant things about the industrial food system is they've managed to put this cloud over everything they do. It's like this dark robe. You just show up at the store and food is magically there and you don't understand the pathway.

If you start reading Michael Pollan, watching movies like *Food, Inc*, educating yourself on these topics and start to care, what's great about food is it's non-denominational. You're conservative, there's basically government subsidy handouts of corporate welfare for junk food. Get on board with that. If you’re liberal, animal welfare and all that stuff, there's a zillion issues with food where you can care enough to make yourself healthier in the process. It's pretty amazing.

Jonathan: I love that, Darya. What are some of the key values you personally have found have helped you to live this automatically and simply slim and healthy lifestyle?

Darya: I've learned to care a lot about this stuff. Now that I know what is involved in the industrial food chain, it's horrible for the environment, it's horrible for the animals. It's creating antibiotic resistant bacteria, which are threatening our hospitals. The food poisoning outbreaks, it was like a half a billion eggs were recalled in 2010 with salmonella. That's ridiculous. That would never happen at a small farm because they don't produce half a billion eggs, for instance.
Also, just I think that a big part of our problem as a society is that we've lost a lot of the culture that has traditionally dictated when to eat, what to eat. In Europe they still have a tremendous value on dinnertime and lunchtime. They sit around the table as a time to bond with family and friends. It's a two-hour event. Food is very important. They don't care about fat and cheese and pasta, they eat that stuff all day and they're healthier than we are.

I think that if we could cultivate that value, the value of food for someone's sake, food for the sake of enjoyment and bringing people together and pleasure, I think that that's just as important as the methane that cows are farting out and ruining our atmosphere with.

Jonathan: There's an irony in here, Darya. I'm a software engineer and you're a neuroscientist. It seems like one of the common denominators we're arriving at here is this left brain, logical, calorie math, how much food can we make for the cheapest amount. If we take and shift a little more right brain, a little more emotional, a little bit more food as connection to other people, connection to the planet, habits, thinking with the heart in addition to thinking with the head, we might be better served.

Darya: Yes, I think so. It's funny, we forget that we were actually designed pretty well to feed ourselves. That is embedded into our culture and into our DNA, to some extent. We've lost a lot of that, and that's sad.

What do we get for it? What do we get? We get to eat nasty tasting Gogurt in our car. We lost a lot. We've convinced ourselves that we're saving money and time, but for what purpose? I'd rather spend the money and the time and have a good life, eat food that I enjoy, spend it with my family than spend an extra 20 minutes at the office. No thanks, I'm good.

Jonathan: Darya, what is your take then on exercise? So often, again just like we hear eat less, we hear exercise more and that we can eat these Ding Dongs and Ho-Hos and Twinkies because you just
then need to run this X amount to cancel that out. What does the science say?

Darya: Obviously the science, well I guess it's not that obvious, the science says that's bullshit, to be frank. Exercising doesn't lead to weight loss, per se. It makes you healthier, absolutely. It also makes you hungrier.

What I recommend for people, like I said 10,000 steps a day I think is a game changer for most people. If somebody doesn't work out at all they're probably getting around 3,000 steps a day just driving here and there, walking around a little office and the house.

If they do work out at the gym they're probably getting only around 6,000 steps a day. To get to 10,000 is actually not that hard. It's maybe another 20-minute walk with your dog or with your kids or with your loved ones. It doesn't take that much more effort but you can get there if you try, pretty easily. I recommend 10,000 steps a day.

I do also recommend strength training a few times a week. I have found that, first of all it's so transforming in terms of your attitude, how you look. I did cardio for years, I was running marathons. I would spend two hours a day on the treadmill and I look way better now that I stopped doing that and have just started a little bit of strength training to balance out the tone.

It does wonders for the shame of your body, it does wonders for your metabolism, I've found. I eat a lot now that I've added all this muscle. I don't think it's because I burned 200 calories today at the gym and can now eat 200 more calories. I actually have had my basal and metabolic rate tested. If I just sleep all day I burn 1,750 calories a day. Me, I'm pretty small. That's without doing anything. I have this crazy metabolism now which I didn't used to have at all when I was doing my old dieting stuff.

I credit a lot of that to strength training but I don't think there's any reason to be like neurotic about it. A few days a week, lifting
some weights all over your body, being even and just getting those 10,000 steps. Occasionally getting your heart rate up. I think that's great, but I think you should do it for health, for confidence, for shape and the way you look and because it's fun.

After you do it for a few months you get addicted to the gym just like you get addicted to cookies. It's just better for you.

Jonathan: There's an amazing irony and it's so hopeful. What you just described is by eating more and exercising less you transform the way your body works rather than by eating less and exercising more, trying to overpower your body into some weakened state.

Darya: Absolutely.

Jonathan: That's awesome. I'll eat more and exercise less. That sounds good to me. Well, Darya, obviously you've got your wonderful book Foodist and your wonderful website Summer Tomato. What's next for you?

Also, I just want a little bit of backstory on Summer Tomato because this site is no joke. Is it just you or do you have a staff? The site is awesome.

Darya: Thanks so much. It's been just me for years. I just hired a recipe developer, Elise Topeki, she's amazing. I'm just not a chef. I cook for myself all the time. I don't measure anything, I don't write anything down. People have been begging me for recipes so I did hire her, but I do all the back end, I do everything myself. It's really been a labor of love.

Jonathan: Well, it's very cool. Folks, if you haven't checked it out the website itself is SummerTomato.com. It's just a beautiful site and a beautiful resource. Darya, you've got the book Foodist which, folks, again check out. It is a lovely, scientific and wonderful and helpful resource. What's next for you as a professional and also personally?
Darya: I have so many things I’m working on I can’t tell you.

Jonathan: Are they all secret? Are there any that you can share?

Darya: I’ll just say that I’m getting more excited about some video stuff. I’ve been working on some video projects. I’m interested in making things that are tools people can use to take what I’ve written in *Foodist* and really implement it in their lives.

I think that some people will just be able to read the book and vroom right in. Other people are going to need a little more guidance. I’m seeing what I can do to try and create that for people.

Jonathan: Very cool, very cool. Well, if your current work is any indication of your future work it looks like you will be very successful at helping those individuals.

Darya: Yes, I hope so.

Jonathan: Folks, again her name is Darya Rose, an absolute wonderful resource. Check her book out, it’s *Foodist*, as well as her website which is SummerTomato.com. Darya, thank you so much for joining us today.

Darya: Thank you so much.

Jonathan: Listeners, remember, this week and every week after eat smarter, exercise smarter and live better. Chat with you soon.