



Danny Lennon:

Hello and welcome to Sigma Nutrition Radio, the podcast that brings you evidence-based discussions with the world's leading researchers in fields related to nutrition and performance. I am your host, Danny Lennon, and you are listening to Episode 125 today. And on this week's show, I'm going to be talking with Cassandra Forsythe, who's going to get into some topics that are becoming increasingly common health issues as I'm sure many of you who are coaching will be no doubt familiar with and I'm sure many people listening will also have some experience with these issues. And in particular, we're going to focus in on amenorrhea as well as some dieting strategies that tackle IBS. Cassandra is an assistant professor in the Physical Education and Exercise Science Department at Central Connecticut State University and she also holds a doctorate in Exercise Science and Nutrition from the University of Connecticut as well as being a registered dietitian.

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So that's it. Let's not waste anymore time. Let's dive straight into this week's episode.

Cassandra, welcome to the show. Thank you so much for joining us today.

Cassandra Forsythe: Thank you for having me.

Danny Lennon: Maybe as a way of providing listeners with a bit of context, can you maybe bring us through your background in terms of what you've done in academia and the kind of work you're doing?

Cassandra Forsythe: So I grew up in Northern British Columbia, Canada, so kind of in the middle of nowhere. Went through my academic [00:02:56] in 1997 in college and I thought it was going to be a business major and decided after taking economics I hated it, so I transferred into nutrition because I love to eat and I was really into supplements and supplements for weight loss and for body recomposition and stuff like that, and I've always loved the bodybuilding lifestyle. Actually, when I was 11 years old, 12 years old, I used to watch American Gladiators and I wanted to be an American Gladiator. So, [chuckles] I was always into that. And so in college, I always looked at nutrition as a way to heal the body.

While I was in my bachelor's, I was at the University of Northern British Columbia first, which is in Prince George, British Columbia. Then I went over to University of Alberta, which is in Edmonton, finished my Bachelor's in Nutrition and Food Science, and then I started a master's right away in 2002. I did a feeding study, human feeding study, all in nutrition, and I studied cholesterol metabolism using tritium that was tagged onto cholesterol in the body to determine production rates after eating meals, so it was kind of cool. I did some pretty fancy sciencey, geeky stuff. And then, while I was in my master's, I hated it and I was miserable, and I wanted to do more research because I really got into it and I really wanted to actually teach in college when I was done, like that's what I wanted my career to be. So I decided to pursue a PhD and I actually got into the PhD program at UConn, University of Connecticut in Storrs, Connecticut, and the way I found that was actually through John Berardi.

So John Berardi and I connected back in 2002 and it was after I read a T Nation article but when the magazine was in print, Testosterone, and he wrote an article about covering your nutritional bases and it was saying—I love the article. I was like, “This is really cool. It thinks outside the box,” and it said he was doing his degree at University of Western Ontario with Pete Lemon. And I emailed him out of the blue and I was just like, “Hey, I want to do a PhD just like you,” and he's like... We met, we talked, and I went to a conference and I met a whole bunch of people, and like the rest is history. I ended up at UConn and did five years at University of Connecticut studying with Bill Kraemer, who's like father of strength and

conditioning, and I switched into kinesiology, so exercise science – so went from nutrition to exercise science. So I actually have training in both and, after I finished, I finally graduated in 2009 after 12 years of school.

And actually, while I was in school I wrote two books. I wrote *The New Rules of Lifting* with Lou Schuler and Alwyn Cosgrove, and also the *Women's Health Perfect Body Diet*. I used to write for *Men's Health* magazine. I just got really lucky. I just got the right place, the right time, and I was a good worker, and when I was done school I was just done. I opened a gym. I ran my own gym and business, 4000-square-foot facility, for five years. Sold it last year and now I'm back in academia teaching. I'm an assistant professor at Central Connecticut State University in the Exercise Science Department. I primarily teach exercise science courses but I'm going to start...teach nutrition courses too this next semester.

So I have a very wide background and I did still stay in the bodybuilding realm. I competed in figure and fitness and I lift weights religiously and have a...I'm known for pregnancy exercise advice and a lot of different things. I just worked hard and just kind of did my thing. I guess I don't watch a lot of TV.

Danny Lennon: And just looking at that kind of background, I think that puts you in such a great position to talk about some of the issues we're going to get into because you have both that academic side of actually going and doing research and working in academia but also that very practical side of having worked with people, but then also both through exercise physiology and nutrition, which I think is so invaluable when you're trying to distill information for people who are going to be trying to power their performance through nutrition. So there are a number of different things that I really wanted to get your views on, so maybe if we start with the first one, I think a scenario on a topic that at least in my experience is becoming such a huge issue right now, and that's around amenorrhea, both in the general population but and in high-end athletes or very active people. So they're coming to a lot of us coaches with the symptom of a disruptive menstrual cycle or even complete loss of the cycle. So, maybe first, what are the kind of primary factors that are causing this loss of the menstrual cycle most often do you find?

Cassandra Forsythe: The biggest thing is actually stress and stressing out about not having a period. So stress, I mean, I'm a stress case, like it's insane, and I actually had no period for over five years. So I struggled with amenorrhea personally myself and it was right when I was trying to do bodybuilding

and figure and fitness while I was doing a master's, while I was trying to like navigate being in a relationship with someone, and being a perfectionist, and all that stress just drove my body into a place, which is most women, drives them into a place where they don't cycle, and I had no period. It was quite frustrating. It was scary. I used to do like tons of different blood work and I did a lot of research and talked to experts in the field. Because I was in academia, I actually had the pleasure of reaching out to researchers that focused in on that and one day I would like to research it more. But anyway, that's a side story.

So the biggest thing is stress. So the stress can be life stress. It can be competitive stress, so like as an athlete. It's any stress that drives the body to like high cortisol levels, which drive down progesterone, which can drive down thyroid hormones, which can lower body fat levels, which can make it hard to sleep. So everything is in this like perfect storm for the body of a female to say, "This is not a good time to have baby. I am not going to produce a menstrual cycle for you. I'm not going to ovulate. I'm not going to release any eggs." So it's sad, it's actually really sad that that happens, but I've actually worked with a lot of women now who have been in that place and I basically have told them to chill the hell out, and I actually said that a little differently with the F word but I wish I could say it out in this podcast, but I would say, "Chill the hell out. You've got to bring yourself to a better place mentally. You have to love your body. You have to put yourself in a better place in your entire life and this will come back, and don't stress about that and just try to find peace." And I get women being like, "Oh my God, my period finally came back. I'm not worrying about it as much anymore."

And it wasn't changing diet because for me, everyone told me, "Oh, it's because your body fat levels are so low." Okay, well, I got fatter, my period never came back. And I've had that with other people I've known. It doesn't matter how much weight they regain, their period doesn't come back because they're still stressed out. Or, they say, "Oh, you're not eating enough." Okay, well, then you get people to eat more and that's actually been written in the research too, but that's not the case. It's like this cognitive stress drives down through the hypothalamic pituitary axis, down into the ovaries, and it's like, "We can't do this. There is no baby-making right now," and it's women's bodies' protective mechanism for this whole, you know, our reproductive cycle.

So, in competitive athletes and noncompetitive athletes and just plain Jane, you know, girl next door, all of this can happen when people stress out too

much. And in today's society with social media causing us to be so comparative, like, "Oh, look at how happy this person is," and, "Oh my God, look at her body composition," it's like you're thrown in the fire every day about how to judge yourself and how to put yourself down, and it makes it really hard on women. Like it's not just magazine covers anymore, it's like everywhere you look you have someone like, "Oh, look at how lean I am," or, "Look at how happy my life is," and it's pretty sad. I mean, guys deal with it too. I have friends that have gone through it, not that it's amenorrhea but men will get kind of like almost andropause, like low testosterone, and they have a hard time putting on muscle mass. They are tired all the time. And then they think like, "Oh, maybe steroids are the answer," or whatever, and that's kind of a Band-Aid. Just like women, they go to the doctor and the doctor says, "Oh, you're not having your period. Let's put you on the pill," let's say, if they're not on the pill, and that's again a Band-Aid. That's not a solution. It's not fixing the body.

And a lot of us really just are too hard on ourselves, especially in our industry, like we push and push and push. And I finally, when I got my period back, it's when I started dating which is now my ex-husband, I married him and he was a good person for me—he actually got me out of the gym. He got me into like a happier place. We did different things than just lifting weights like hiked and mountain-biked, and like I got to a peaceful place and my menstrual cycle came back and I wasn't always just worried about body composition. It was more just like "enjoy life," and a lot of people need to do that for themselves, like enjoy life and put themselves in a better place, whatever that may be.

A lot of people I see also too are like quitting their jobs and like joining the fitness industry and becoming a personal trainer and thinking like that's going to solve all their problems. It's not. If you're not happy before you quit your job, you're not going to be happy necessarily after. So we have a tough life now and I'm so glad I didn't grow up in this social media or like as a teenager, like I can't even imagine what these girls go through nowadays.

Danny Lennon:

Mm-hmm. Yeah, I think there are a couple of really, really important messages. Obviously, the one around social media is really interesting and I think it's important that you bring it up because I've seen it especially and I look around at some of just girls I know and women I know that are, again, like you say, harshly judging themselves against what they're seeing and making these really unfair comparisons. And it's crazy to me because these are like really beautiful women but they don't see themselves that

way because of what they're seeing around them, and it's just, like you say, this kind of stress and this momentum builds up and it becomes this cycle then where more stress is causing the problem that then leads to even more stress. And so I think one of the really interesting things that you touched on was how so much of it is cognitive and psychological stress as opposed to what people typically think of when they're thinking of amenorrhea, or at least a lot of the time I think it's become a lot more well-known that people like, "Oh yeah, you're probably just doing too much training and you're under-eating. You're calories are too low because you're trying to get too lean. So that's why it's stopping." And I'm sure that energy availability piece is one part of that puzzle but, like you say, it doesn't explain it all because when we look at just how many women, at least from what I've come across, how many are losing their menstrual cycle now, not all of them are like physique athletes who are massively under-eating and doing lots of training. There are so many people outside of that who are not over-training and not under-eating who are still suffering from this, right?

Cassandra Forsythe: Oh yeah. Yeah, and you will see really lean women as well that aren't stressed out that still have their periods.

Danny Lennon: Right.

Cassandra Forsythe: So it's not related to body fat percentages. And you know, one of the researchers who I talk to that's an expert in this, Mary Jane De Souza, she said you'll see women, like anorexic women, like super-lean but aren't necessarily stressed out, like hospitalized, that will still menstruate because they're not necessarily stressed. They just know how to restrict their calories to get really lean but, psychologically, they're not actually stressed out for whatever reason.

Danny Lennon: So if we're talking about pragmatic advice in terms of, number one, preventing this from happening in the first place and then, two, trying to reverse that problem once established, like you mentioned, obviously the big thing is trying to get people to relax a bit about the whole issue. Have you found anything in practice that works particularly well for getting people to do that? Because often it's difficult just to say to someone, "Oh, relax a bit and you'll be fine," if they're already so frustrated. It's kind of a hard thing for them to put it to action sometimes. Have you found anything that's useful that makes sense to them?

Cassandra Forsythe: Yeah. You know what? Interestingly, I actually haven't had any problems when I've actually told someone that, "You're not broken. It's just time to relax a little bit and don't worry about it." Honest to God, like I've had such really positive results with just telling someone, "You're not broken. You're going to be able to have a baby if that's what you want. You will. Now is the time to give your body some love, tell your body it's okay, and don't worry, it's going to be alright." And that actually has worked for the women. I know it may sound a little skeptical to say that or think that, but it actually really has worked.

Danny Lennon: That totally makes sense and I think it just highlights again the real valuable part of coaching is imparting some sort of education towards a client as opposed to just like specifically telling people what to do. And so like in that case where you're actually educating people on allowing them to understand why this is happening to them and then how changing that and relaxing a bit more will actually fix the problem, that kind of educational piece gets them to take action and do what's needed to be done straight away.

Cassandra Forsythe: It's just, "Hey, you're okay," and a lot of people think they're broken. I always thought I was broken. Like when I was going through it, like I did all this like blood work and I was trying to figure out what it was that was wrong. There really wasn't actually anything wrong other than I was just too hard on myself.

Danny Lennon: Yeah, and you can just imagine how it's easy for that to spiral down, particularly if you're doing more and more testing and you're going deeper and deeper down that kind of rabbit hole, it becomes just this kind of cycle of even more stress on top of it when you don't find that solution. So I think that's really important work.

One other particular area that I know you've written about and spoken about a lot and helped a number of people with is a really common issue now as well around IBS, and I have a number of clients, again, who will typically come in with a lot of the IBS-like symptoms. So maybe just to kind of frame this for people listening who maybe aren't as familiar, what kind of are the typical symptoms we see with a diagnosis of IBS and why is it that it's almost this very generic vague diagnosis people receive that ends up not being a whole lot actionable for them, at least at the outset, at least from people that I've come across that have maybe received poor advice in the past?

Cassandra Forsythe: Well, again, this is another thing where people think they're broken, there's something wrong with them, and then they stress out more and it makes it worse. So IBS technically, I mean, it's irritable bowel syndrome or whatever term you can give it, it's kind of an unspecified issue within the gut, whether it's excessive gas or constipation or diarrhea. There are a couple of different ways it can go depending on you and your body and a lot of it has to do with diet. So there are certain foods out there that can cause more flatulence, diarrhea, constipation than others, and those I discovered they're called FODMAP foods. And it's not that I discovered this and like I researched it. I mean, I found it by searching online basically and reading papers. And since I've written about it, I think I wrote about it about four years ago, it's like gone off the charts. There are books on it, there are cookbooks, there are people like—I'm not saying I started this but I kind of picked up on it at a time probably when it's getting popular, and there are people dedicated to just consulting people on this. And there are typical foods you eat, like things like apples, asparagus, cauliflower, cashews, almonds that are in a lot of foods and you think like, “Oh, I'm doing my body good by eating these things,” but if you have a prevalence of potentially maybe imbalance of bacteria in your gut or whatever it is that's causing you to have the symptoms, like usually bacterial or poor enzyme quality, and people think, “Oh, I need to take enzymes or I need to take probiotics,” but if you don't get rid of the foods that are feeding the issue, whether it be feeding bacteria or causing irritation to the gut in whatever way or form, you're not going to...whatever enzyme you take or probiotic you take is not going to help it.

And, I mean, there are people legitimately out there, like I'm not trying to like say it's like this simple and you should cut out apples—they're totally fine—there are legitimately people who have Crohn's or colitis or something going on that there's something deeper than just FODMAP foods. So I'm not trying to like limit that, but there is a dietary component and, again, it's also worrying about it. Like a lot of this always comes back down to this thing for people like, “I'm broken. Like I need this, I need that. I need to do something different with my body.” And if you look at the people that are not broken to a sense, they're the ones that actually don't worry about it as much as others.

Danny Lennon: Right. Yeah.

Cassandra Forsythe: Like a hypochondriac, like, “Oh, there's always something wrong with me. I have to go to the doctor. I need medication. I need this.”

Danny Lennon: It's such a huge issue. It's something I've talked about before that, especially as we start trying to educate ourselves on health and nutrition, is very easy to just get—a kind of term I've used before is—just enough knowledge to be dangerous and you start reading about all these things that can potentially be wrong or potentially unhealthy in foods, and it seems to kind of spiral into causing an issue almost like it's a placebo thing. But specifically when we look at low-FODMAP diets for IBS, now let's go on the presumption that someone has maybe gone to a gastroenterologist and is being cleared for celiac or Crohn's or colitis and they're still presented with these symptoms and they've been kind of this diagnosis of IBS. Can you explain perhaps, number one, what specifically these FODMAPS are and why are they potentially problematic for someone with IBS?

Cassandra Forsythe: FODMAP stands for fructans, oligosaccharides, disaccharides, monos, and polyols, which are, if you know anything about carbohydrates, I mean they're just divisions of carbohydrates but, of them, they're the ones that will be most fermentable in the gut by gut bacteria. And if you have a background of like antibiotic use when you were a kid, which probably most of us do for ear infections or whatever, you probably have something like messed up in your gut or acne; you antibiotics for that. There's probably something not like completely great about your gut or whatever it may be. So these foods that are high in fructans, for example, which is something that you get in apple, they will ferment and they cause either water to be pulled in the gut and you get diarrhea or, other people, they cause the gut to slow down, which will be constipation, or they just cause fermentation and you get a lot of gas.

And on my website, if you just google Cassandra Forsythe FODMAPs, I put up a list of what I found, but there is like a huge amount of lists all over the place and you kind of got to play with these lists of different foods to find out like which ones are actually really bothersome for you. So, for example, one of the FODMAP foods is actually supposed to be wheat. I've actually found for myself no, there's no problem with wheat, like flour products like pretzels or something. So you actually kind of just have to be personal with it. Some people are like super-sensitive to wheat, but that may be another issue.

So what you do is you go through these lists of the foods and you got to really like give yourself an honest try like common foods, things like cabbage, obviously. Onions are a huge offender. Garlic is a huge offender. I mentioned cashews and almonds. Almonds, almost in every freaking like

paleo bar and whatever, and so it's kind of hard to avoid; you got to look into it. Lactose can be an issue for some people, but other people dairy will be alright. Like I actually don't even use whey protein anymore. I use pea protein, which I completely love.

And when I was going through it, like I actually have had a foot of my intestine taken out too, which is pretty interesting. So I was taking like Xifaxan, which was an IBS medication that was supposed to help because I was always constipated. And then in 2005 or end of '04, I found out I had rectal prolapse, so my intestine was actually coming out of my body and as fucked up as that sounds, excuse my language, but as messed up as that sounds, I was like, what the hell? I go to the doctor and they're like, "You have too much intestine, which is also contributing to this whole like bacterial imbalance thing." Since I've had my intestine taken out, afterwards I still had problems and it wasn't until like—I thought oh, this surgery's going to be it—until I finally found the FODMAP stuff it made a difference, and I've worked with a lot of clients and talked to a lot of people. Like it's a very popular topic now and I get emails like once a week at least, people asking about it, because people are starting to realize like there are these specific foods connected to the flatulence in the gut or the diarrhea, the constipation, that isn't resolved by saying you average celiac or Crohn's or whatever, like you just said.

So like there are great books out there. There are great websites. The big institute that does the most research on it is the Monash Institute, which is in Australia, M-O-N-A-S-H, and they have an app, a FODMAP app you could put on your phone that tells you like foods to completely stay away from and which ones are okay. So it makes it easy, but the biggest thing is you have to be like super-honest with it, like cut out the things it says to cut out. Don't just be like, "Oh no, that's not a problem." No, it may be and like sometimes your symptoms don't show up for six to 12 hours after you eat them because of transit time in the gut. So you can't say like, "Oh, I ate that and I was fine." Well, 12 hours later that may be coming up instead of just like two hours later. So some people forget to think about those associations but, overall, once you give it a good try, a lot of people find really good success with it.

And it is very individualized because there are certain things like I can eat a little bit of an apple. Like if I don't eat it for very often, then I'm okay that day, but if I had like an apple one day and an apple the next day, well, I would not be in a good place. So you kind of just got to play with it, give your gut some time to just sort of re-regulate and then slowly try to

reintroduce foods you think you really love, and if you have symptoms then okay, and if you don't then good, cool, maybe that food's alright for you in whatever capacity.

Danny Lennon: There is such a growing strong body of evidence around this showing benefit for IBS-type symptoms and so it's really fascinating to see how this is developing and there's more and more stuff we get on it. In terms of people that are maybe listening that identify with those symptoms or have a diagnosis of IBS or if they want to check if FODMAPs is the issue that's going to help them, is it simply a matter of then going on a low-FODMAP diet and see if it offers relief or is there any specific test that would give them solid info or is it literally just going on a test or going on a diet and seeing how that works out for them?

Cassandra Forsythe: As far as I know there isn't necessarily a specific test. Like, I mean, there are gassy tests like a lactulose breath test, so they'll feed you lactulose and then they'll measure methane production in the breath. I actually did this when I was at University of Alberta. So you take this drink and then you expire into this bag kind of thing, like this collection bag for a while and it tells you how much you're fermenting, and that's one of the FODMAP things.

Danny Lennon: Right.

Cassandra Forsythe: So there is a kind of a test that'll tell you how much you ferment, but basically then the solution to that is to not eat foods with that in it. So what you could basically do is just like you said, like go on a low-FODMAP no-FODMAP diet and watch your symptoms.

Danny Lennon: Sure, and yeah, it's one of those things where it is a kind of case of all or nothing as opposed to—you can't really dabble in a low-FODMAP diet. It's either buying all into it or nothing. And then, obviously, on the testing that you mentioned around if someone...presumably, if there's more fermentation, that just means that person is just not able to absorb those types of carbohydrates you mentioned properly or there's some malabsorption that's causing that fermentation.

Cassandra Forsythe: It's a fermentation in a sense and potentially a malabsorption like if there's a lot of irritation in the gut or some people say there's also leaky gut, and so it's like passing through the gut undigested. I'm not really sure all about leaky gut like in terms of the flatulence part because that would be like inside the gut, not into the body. But it's more of a fermentation factor, so you're like feeding the bacteria that want to like produce methane and/or

cause irritation of gut, which slows it down, and produce short-chain fatty acids which are what bacteria produce, which again could be irritating to the gut and also can contribute to weight gain. I just did a talk on why it's hard for some people to lose weight and in imbalance of bacteria in the gut and you're eating foods that cause flatulence or constipation or diarrhea, actually they'll produce these short-chain fatty acids which have a caloric load to them and also can change some of the hunger hormones in the body like peptide YY and leptin and ghrelin and whatnot and like their regulation, so there's some like actually weight gain and like body control issues with like having excessive gas or diarrhea/constipation that's not of the normal.

Danny Lennon: Hmm, that's super-interesting. I did want to get onto one final topic before we start to wrap up...

Cassandra Forsythe: Sure.

Danny Lennon: ...and actually kind of relates back to earlier when we were mentioning around a lot of the stress cause around kind of body image issues and comparisons, and one of the big things that comes up particularly with women is this whole topic around cellulite and how big of an issue it is. Is it really this kind of big scary thing that so many people are almost taught to fear by all this information that's put out?

Cassandra Forsythe: Well, what is cellulite? [Laughs] I mean, every woman has I guess their own view of it. Like, I mean, I think there's more talk about it to let women know that it's pretty normal and if you have it it's not because you're a bad person or because you eat the wrong foods. Sometimes it's very, very genetic. And I wrote an article on it for Girls Gone Strong, which I encourage all women and men to read and just let you know about the biology of it. It has to do with the fact that women's...like the way our skin is structured is different than men's and if there's fat underneath the skin it kind of bubbles out a little bit in a sense, like kind of bumpy like a mattress or like an orange peel. And as frustrating as cellulite is it is just super-common in women, like I said, just because of the way we're built and we tend to have more body fat and sometimes, no matter how lean you get, you'll still have this appearance to your skin.

Again, I think the conversation has been changing and we are more accepting of maybe not like these perfect body types, but if it's your body and you have it and you're not so comfortable with it, yeah, it's not going to feel so great. Maybe if women come to understand like, okay, you're

doing the right things, you're eating well, you're a healthy person, you exercise, you take care of your body, but you still have maybe this like not smooth appearance to the back of your thighs, which is super-common, or maybe in some women's midsections, and it's actually not as ugly as you think it is. Because it's kind of like that social media thing where we look at like smooth physiques and like thigh gaps and we think like that's what we think is attractive, and then you talk to guys and you find out like, hey, they actually don't mind. They don't really care and it's really more your concern than theirs. So it's okay, and that makes it easier when you know the people that love you love you for all you are, dimples and everything.

So how do you get rid of it? What can you do about it? You can actually get rid of it and it's like super-genetic. We're getting more into these body acceptance...and not saying like, "Okay, it's okay to be like unhealthy and not do good things for your body but like, hey, if you don't look like something in a magazine that probably doesn't even look like that anyway, that's okay because that's real and real is actually really attractive and really cool."

Danny Lennon: Is there any particular message that you see permeating the health and fitness industry right now that has maybe become common that you just wish was less pervasive or wasn't there? Is there any one that kind of stands out as an overarching message that gets pushed quite a lot even though it shouldn't?

Cassandra Forsythe: Not anymore, I mean, not in the good part of the fitness industry, I mean that the stuff like that we're in like I said with Girls Gone Strong. I mean, you still see in magazines, though I guess it's just more say magazines, like Lose 10 Pounds Fast or Be Less, Not More, like How to Get Skinnier, How to Get that Guy by Whatever. So maybe that's the stuff that's still out there that's being pushed, but I think it's improving. Like even just in People Magazine they did like, I think it was like Real Body, Real Love, and actually Molly Galbraith of Girls Gone Strong, she was featured in there like just in her bathing suit saying, "Hey, I'm a size 10 and that's okay."

Danny Lennon: Right.

Cassandra Forsythe: So it's kind of that conversations are changing and there is more acceptance but, I mean, I think it's actually good that we still say to people like lose some weight, whatever, because it is really easy to be lazy. Like, you know what I mean. Like you have people that will just sit and watch

TV and then before they know it they put on weight, and we don't want them necessarily to say that's okay because we know that weight gain especially in the midsection isn't good for long-term health. It leads to health complications, breathing problems, depression, cardiovascular disease, whatnot. So it is good that we say like, "Hey, have a healthy body."

Danny Lennon: So, again, we still want to promote eating well and we still want to promote exercise and active and getting to the gym, but it's whether we're framing that in a way of doing it because it will make you healthier and happier as opposed to doing it purely for aesthetic reasons even at the expense of maybe emotional health or even physiological health, and I think those two ways of framing the same bits of advice around training and nutrition are very different ways of looking at it and can certainly shift someone's mindset to how they are at least willing to take in that information and how they use it or to what extent. Just coming up close on time here, Cassandra, so maybe before I get to the final question, can you let people know where they can find more of your work online and where they can track you down on social media?

Cassandra Forsythe: I'm not like super-prolific about writing on my blog anymore. I've gone back in academia and I really focus on the students now and what I do like as an assistant professor and I really feel a lot of reward in that, but I do post...like Facebook is probably the best way to follow me and I do have my website which has tons of great content on it, which is CassandraForsythe.com.

Danny Lennon: For sure, and all of that stuff I will link to in the show notes for everyone listening and you'll be able to go and click through to that stuff. So, Cassandra, this brings us to the final question that we end the show on and it can be to do with any topic even outside of what we've discussed today, and it's simply if you could advise people to do one thing each day that would improve their life in some aspect, what would that one thing be?

Cassandra Forsythe: Gratitude, saying what you're grateful for that day, either the sun shining or your cat or your dog or your home or your health, just because we don't actually look at all the good things in our life enough. We tend to like focus at what we don't have but not what we do have, and there's so much good in our lives and we're so fortunate living in this country and in this world today that we have a lot to be grateful for. So, I guess gratitude. Something you do every day is be gracious for what your life brings you.

Danny Lennon: Mm-hmm. Couldn't agree any more. Perfectly put and a great way to finish off the show. Cassandra, I want to say thank you so much for your time and your really valuable information. I know people will take a lot from it. So thank you for coming on the show.

Cassandra Forsythe: Thank you for having me. I really appreciate it.

Danny Lennon: And there we go, another episode done and dusted. Thank you so much for again listening in to the show and downloading it and for mentioning on social media as well as to everyone who has continued to support the show on the Patreon platform where you can go and do that for \$1 if you go over to Patreon.com/sigmanutrition. There are also details up on the Sigma Nutrition website of what all that involves.

As well as that, you can also sign up to receive the Sigma Synopsis, which is a weekly email that keeps you up to date with all the latest content produced that week as well as some recommended articles from around the web, some other recommended resources that I'll give, and a lesson of the week. It's a nice short email where you can kind of scan through all that stuff and keep up to date if you've been busy over the week, and that will be sent out to you every Friday. So it's free to get that, just pop over to SigmaNutrition.com and click on the Sigma Synopsis and you will get that direct to your inbox.

And that brings this week's episode to a close. I hope you found something useful in this week's episode, and I will be talking to you again next week.