Introduction and JJ Virginu2019s background

Welcome to this episode of the PCOS SOS Summit. I'm your host, Dr. Felice Gersh. With me for this episode is an amazing woman. I know that adjective has been used many times, but it truly applies in this case.

JJ Virgin, who is a fitness and nutrition expert. But it goes way beyond that. She is the author of four New York Times bestsellers, has appeared on multiple television shows, has coached some of the most famous people in the health care arena, and has a new book out on being a warrior mom, which I can't wait to read and is just always creating and coaching and really about transforming lives.

So welcome. JJ Thank you so much for joining me and I can't wait to hear all of your wisdom. But first, if you could share with our viewers a bit about your own journey in life and how you ended up going in so many multiple directions and and just how you got to where you are today.

You're so funny as it feels like multiple directions, but then it all kind of goes together as this perfect path. And most people don't know. I actually started out.

I've always been obsessed with health, but I was obsessed with health and fitness because I wanted to be a Broadway performer. And so so, yes, I was in San Francisco going through high school, going to American Conservatory Theater, and I went up to UCLA on a theater scholarship.

And then I got there. And you know what? Everything that I was being taught at UCLA, they said, you're going to become a waitress at CHIPS. It was this little restaurant, this terrible little restaurant in L. A.

with these. Yes, with the toasters. And I was like, I don't I'm not going to UCLA become a waitress at chips. And so I dropped out of the theater department.

I started teaching aerobics at the local little health club. And I didn't know what to do. I was like, What? What am I going to take at school? And some English professor insulted me about my writing and I thought, All right, well, I'll be an English major.

And so it's so funny. And and then I ran out of units and I couldn't take any more of the exercise or nutrition classes I wanted. So the day after I graduated, started in grad school in exercise skills, and then I went all the way up into grad school, doctoral school, and that then I say once I say nutrition, I'm like, you know, perennial student.

But what's so interesting is I was I catered my way through high school and college. And, you know, I was an English major. I did all of this acting and all of this fitness stuff, and someone would do it.

And then I studied all this exercise and nutrition, so I was like, what is what is she going to do with all this? And then you look and you go, Oh, she can write, she could speak, she could do TV.

I mean, it works perfectly, but it certainly looked like a big mess at the time. My mom was like, What are you doing? Could you just decide on something?

Could you get a job, honey? Just get a job, right? Wow. So did you get a job? No, but I had. So I did. I got a job. I've had one job in my adult life.

I got hired to work at a physical therapy office to pull bring in the exercise and nutrition. I got fired in three months because I had too many ideas.

So that was my one adult job. And no, I'm not employable. So therefore I have my own businesses. It's way more

fun. Right. Keeps you up at night, but it's way more fun.

And really everything that I like, I'm more obsessed about health and nutrition and fitness now than I was in my twenties. Like, I'm still so excited about things and it's even better now because there's so much more research, so many more tools.

It's incredible. And what's crazy about all of this, Felice, as you look at it now and you go, okay, we have the Internet. I used to have to go to the library and UCLA and go into the stacks to find things.

Now we have the Internet. We have way more fitness stuff than we used to have. We have all these different foods and we are we are sicker than ever.

Why muscle matters for metabolism and blood sugar

What the heck? Oh, absolutely. And I know that you really are one of the most powerful advocates for the power, the powerful healing of nutrition. And we could talk all day about that.

But there's an area involving health that's so critical, that is so under-discussed and underappreciated, and that is the importance of the musculoskeletal system.

And most people talk about bones and they completely forget about muscles. So maybe you could, like share with our audience a little bit about what muscles do in the body and why we should really care about them.

It's so much more than what people realize. So now when I was in grad school, we all the research was being done on aerobics, right? And so I was like the rogue person because I did mine on building strength and you know, and that was like they wanted you to do the aerobics stuff because they were funded by Precor.

So and back then the prevailing thought was you should never go and lift weights until you lose the weight. So do all the cardio to lose the weight first and then lift weights.

And I go, That is the dumbest thing ever, because if you build muscle, it will help you lose the fat. But it's still the prevailing wisdom is, oh, do all that cardio to lose weight.

Despite the fact the research is really clear that if you want to be able to burn fat better and lose weight, resistance training is the way to go on the exercise size.

You know, we can talk the diet side too, but, you know, when most people think of muscles, I think they think of, oh, you know, it can make you look good.

I think of muscles as metabolic Spanx. They hold everything and tighter and they support your metabolism because muscle protein turnover is a very expensive process, but they don't realize that muscle is also what I call a sugar sponge.

And it's all it's an induction organ and as such, so your muscles store carbohydrates in them as glycogen. They they water and carbohydrates get together as glycogen your muscles because when you're doing hard, exercise your body has to use that stored glycogen for fuel and deplete it.

And so this is great because if you're looking for a way to have better blood sugar balance, the fastest way to do that is to get some muscle on. Right.

And, you know, and besides, facts can also make you look better. But as a way to improve insulin sensitivity quickly, the way to do that is really by building quality muscle.

Now we think of muscle, you know, we think of bones. But when you have great muscles, you will have great bones, right? Like we're all worried about bone.

And think of just build your muscles that will that will make you have strong bones. And so in terms of how can we go about maintaining and developing better bones, so we want to do resistance training.

Is this something that people can do on their own or should everybody go out and hire a personal trainer? What would you suggest? So to build muscle is two sides, right?

There's the diet part of it and there's the exercise. There's actually three sides because there's diet, there's exercise, there's recovery. You actually build your muscle when you're recovering, not when you're actually doing the work.

You have to do the work to break it down and then you need the amino acids from the protein to rebuild and then you need to recover rest for that process.

So on the exercise part of it, you know, if I said, hey, everyone has to work with a trainer, well, now we've just canceled out a lot of people that are going to go. We can't afford that.

And in a perfect world, you know, we would be learning all of this stuff in elementary school. We'd be learning how to do all of these things like push ups and squats and pull ups correctly.

And that would set us up for life. But, you know, it's not happening. And here we are now. So what's most important when you're doing resistance training is that you're actually doing it in great form.

Form is always going to be your limiter. And so you want to make sure that your form looks good. A mirror can be super helpful here. Right. And YouTube videos, my gosh.

Like we have access to free training all over the Internet. There's some basic things to think about with resistance training. I've divided the body up into four parts and there's three that I focus on because one of them will happen naturally.

If you do everything correctly, you have upper body pushing. Those are things like shoulder presses, chest presses, push ups, dips, you have upper body pulling.

Those are things like pull ups and pull downs and rows. You have hips and thighs, hip and thigh hinging, things like squats and lunges and step ups, and then you have your core.

But the reality is, if you're doing squats correctly, if you're doing push ups correctly, if you're doing pull ups correctly, you have to engage your core through all of those things.

So when I look at doing this, I think of doing very metabolically costly compound movements that use a lot of stuff.

How to build muscle with resistance training

Like, I know you commented about my arms, I don't do bicep curls and I don't do tricep extensions, I do push ups and I do pull ups because that's going to work my biceps and triceps along with my chest and my lots on my shoulders so I don't have to mess with it.

So we do. Bigger movements and if you are injured, if you are concerned about form, then you can go to a gym and use some of the different machines and a lot of times the gyms will have.

You start with the trainer as a complimentary first session, which is great because you learn how to do things. But the big important thing here is you don't ever push past what your form will allow you to do.

Technique is always the most important and then to build muscle the best kind of range to work in. And it's extended since I was in school, like we had, like we're taught something different.

Now the research has been expanded to show that it really you can build muscle anywhere from six repetitions to 30 repetitions and doing multiple sets of an exercise.

So let's say you're doing push ups and you can do 30 push ups on your toes. You could do three sets of those. Let's say you can only do ten. You do three sets of those.

So it's the it's the sets. It's the reps and then it's the rest taking a least. Usually I like to do this every other day, even every third day, cause your body has to do that repair you do some micro damage to your muscles when you work out your your body is going to use amino acids to help trigger something called M2 to do muscle protein synthesis to give you the building blocks and give you the building blocks what you need to build your muscles.

And then your body is repairing while you're recovering. So those are like the three, the three elements I think we probably should hit nutritional because it can get confusing, too.

Oh, absolutely. I definitely want to touch on nutrition and recovery, but let me ask you, you're talking about doing things like pull up and push ups.

So those are using your own body weight. You're not like using any kind of equipment. You mentioned that. Do you recommend that people, if they want to do these things at home, that they should buy some free weights or buy bands?

What is there a place for that or we don't even need them? Well, no body weight can work for a while, but as you get stronger, exercise is progressive and pretty soon you're like, I, you know, it's too easy.

I will tell you one of the things that I love that I think I wish I'd have been out more in the pandemic for everybody because it could have solved a lot of people's home gym problems.

I think the T-Rex trainer, which is this thing that you can put into a doorjamb, I travel with this so that wherever I am, like we went to Bali this summer and we got to one of the hotels and I'm like, you know, they had a couple dumbbells and a bench and that was it.

But I had my T-Rex trainer, so it allowed me to do one legged squats and rows and all sorts of different exercises by having that. So you can do a set of bands, you can do a T-Rex trainer, you can do dumbbells, especially the adjustable dumbbells, and you can do a lot of things at home.

For me, I'm looking at what is it you're most likely to do if you're one of those people that loves to go to a gym because you like the socialization of it or it just, you know, you like to be able to do different things, go to the gym.

If you're like, hate going to the gym, then do it at home. It's most important to find the thing that you will do consistently, because if you look at what really makes the difference with exercise, you're not getting fit one time.

It's the consistency over time that makes all the difference. So if that's a home gym for you, you can do a home gym with, you know, a T-Rex and a couple of dumbbells and for a couple hundred dollars.

So it's pretty cost effective. Now that everybody can manage that. And in terms of you mentioned like different parts of the body, different muscle groups.

So do you recommend that you split up the different muscle groups for different days of the week or try to do it all in one day and then rest for three days?

Is there any best way or any way is a good way. So I will tell you, I think that our current exercise recommendations are abysmal. And, you know, people are like, but I don't have time.

I go, you know what, make time. I had a great nutrition mentor early on. It was like, if you don't have time, make time, because this is that important.

And exercise is like if exercise was a drug, every doctor would be prescribing it. It is amazing all of the different things that it does. Right. And so I know here we're really looking at like blood sugar control, insulin sensitivity, ability to burn fat, like amazing.

It's one of the most amazing tools out there. So what I really love is you've got to hit each body part two days a week. And so you could do four days a week of resistance training and flip it, you know, say maybe do hips and thighs one day upper body and pushing the next and then take a break and then do that again.

Or you can do it three days a week and do all of it really depends on what fits your schedule the best, because on the other days I really like to have people do some cardio that involves some high intensity interval training because that is another thing that is really good for helping burn off that visceral adipose tissue.

It works really great and creating a big oxygen debt that's really good for your metabolism so that you've got things to do. The other thing that I love now, when I think of exercise police, I think of things that are, you know, that are hard, that you get hot and sweaty and might hurt a bit.

And so I don't really think of walking as exercise, but when we think of metabolism overall, we have our basic metabolic rate, our basal metabolic rate that's going to be dictated by, you know, our age or sex, our thyroid and how much muscle mass we have on our body.

Those are things that dictate it. Then we have the thermic effect of food, of which we know protein is going to be the the highest driver there. So just taking some of your some of your carbs and fat and replacing it with protein will give you better metabolic effects there.

Then you have your activity divided into exercise and non exercise activity thermogenesis. The exercise doesn't really do that much during the exercise, but if you're doing hit or resistance training, you'll get bigger effects afterwards.

One, because you've depleted glycogen stores. So now you have a place for sugar to go rather than being stored as fat. And two, because your body has to recover.

So you've had some oxygen recovery your body has to do after the exercise. But the underrated one that people don't think about is something called non exercise activity thermogenesis.

And this is for things like walking, you know, taking the stairs, parking farther away come into effect. But there's a way therapeutically you can use walking that's so important here because if you just put into your plan that I'm going to walk after my biggest meal of the day, or even better, twice a day, but especially, let's say, after dinner, I'm going to go for a 20 minute walk that's going to help lower the blood sugar response to that meal.

It's super effective for doing that. So that is another thing that I think I really believe that one of the reasons we had so many issues during the pandemic is people just weren't moving as much.

You know, they didn't they weren't leaving the house. So they didn't have to go park the core car and walk somewhere they've just home. So all of that neat that non activity that that non exercise activity thermogenesis took a plummet.

Oh, I'm so glad you brought up the thermogenesis issue because as you know, many people have heard this little saying like sitting is the new smoking.

You know, that this sedentary lifestyle, even fidgeting, I heard, is better than nothing, you know? Oh, yeah. I didn't know there was a study they just did where they showed they did this little calf crazy thing.

And what they found is that people that did this walking, I was like, Who on earth would do this all day long? But literally they could have. And I've got this little apple box under me that I could do this by so close.

But if I just did catchphrases all day long on my little apple box, you actually are going to you're triggering me and you better blood sugar control you.

Home equipment, workout splits, and daily movement

Right. So I'm sitting this is a standing desk and I actually have a treadmill right next to me underneath the standing desk. And I do a lot of my meeting standing or on the treadmill.

I don't do my interviews on the treadmill. I saw someone else doing that. I'm like, Well, that's a little weird. But, you know, it is so critical to look at, you know, whenever you can not sit and stand instead better, whenever you can walk instead of stand better, you know, all of that.

We live up on a two storey house and when we did it, our offices are upstairs. I thought, Oh, I should bring a coffeemaker upstairs and put a refrigerator upstairs.

And I thought, No, I should not do that. I should make myself have to walk downstairs to go get all those things. So up and down, up and down all day long, because I don't let myself have all the things I'd want to have up here. Right.

You know, I thought the same kind of thing when they first came out with remote control on television. It's like you're that hard to get up and go to the television.

It's like people that lazy, but it's so funny. They don't make things too convenient, right? Park further away. Every little bit helps. Well, just even when they took that the what does that the vacuum cleaner thing and they made it you know self-propelled like don't do that you know and they they gave you the lawn mowers you could sit on.

I'm like, No, no, no. And you mentioned another word when you were talking a bit ago, you said adipose tissue. Well, women with PCOS definitely need to build muscle and many of them want to lose a lot of adipose tissue because about 80% are overweight or obese.

Now, there's always concern about if you lose weight, you may simultaneously lose fat and muscle. And that brings in the whole now nutrition and timing of eating and and how to lose weight.

And, you know, you are so expert in this area. So talk about if you can like first of all, like, can you exercise after eating? Is it better to exercise on a fast and and then the re feeding and then how to lose weight without losing your vital muscle?

I feel like the weight loss drugs have really shone a light on this, you know, because there's so much talk about, oh, if you use the weight loss drugs like Semaglutide or appetite, you're going to lose muscle.

The reality is, if you ever go on a caloric restriction diet and you don't do the right things, you're going to lose muscle. So it's not just those, you know, that's not it's just that was the good thing for shining a light on this.

I believe that we have to be so careful unless someone's morbidly obese. Like if you are or let's say, you know, 50, £60 or more, then you're going to lose a little bit of lean tissue, too, because realize you have skeletal muscle and you have lean body mass skeletal muscle is a component of lean body mass.

Everything else is fat mass. So you do have about 3% of that lean body mass supports the fat mass. So you're going to lose a little. But kind of my benchmark, when you're losing fat and the leaner you are, the less fat you weigh, the less muscle like you have to spare at all.

Right. But my goal is that you lose no more than 5% of your of your fat free mass. That's like super key. Now, if you had more to lose, you could go up to 10%.

But how do you offset that? So a lot of it has to do with both diet and doing resistance training while you are losing

weight and then making sure that you're monitoring your weight correctly.

In a perfect world, we would not have scales anymore. I cannot stand the fact that we still use a scale instead of a bio impedance scale, like an IN-BODY or a DEXA scan so that we really know what that weight is made up of.

You've got to be able to monitor and you can do this at home within inexpensive bio impedance scale. They're not perfect, but they're going to at least give you that the percentage differences.

And if you combine that with a waist measurement, then you'll know, because if you're losing weight without losing your waist, you're making yourself worse, not better.

Right. We got to make sure that as you're losing, you're losing fat and holding on to our building muscle. And that's why I really the goal here is that you're restoring your metabolic health because you have to be metabolically healthy in order to do that.

We don't lose weight to get healthy. Right. We become metabolically healthy so that our body can build muscle, burn fat. If you're not metabolically healthy, if you're insulin resistant, really hard to burn fat, that's why when you go and do resistance training, it's so important.

But the other side of that too, is diet. Now, it's interesting with women because there's all this talk about fasted workouts, but when you look at all the research, there might be a little bit more of an indicator of losing fat during, you know, when you do a fasted workout, but then it evens out over the day so it doesn't make any impact.

The issue is unless you're doing more long distance cardio where you're using fat for fuel, when you're doing high intensity interval training or resistance training, you're actually using carbohydrates as your primary fuel source.

Whenever you're doing intense exercise, the fuel sources, carbs not fat. So that's coming from your muscle glycogen stores. So why would fasted workouts matter there?

You know, it doesn't. And what I find with all of this is that women tend to not do as well with fasted workouts. So I always say, see how you feel if doing a fasted workout means that you're working out, not you can't work out as hard, you're doing yourself a disservice now you don't want to eat and then immediately go work out because you only have so much blood.

And if the blood is going to your stomach, not your muscles, that's a problem too. So you know the perfect world to be. You get up in the morning, you eat about 90 minutes later, you break your fast, you make sure you break your fast with a good bolus of protein so that you now start to trigger muscle protein synthesis because you you've got enough leucine to trigger mTOR, which is going to trigger muscle protein synthesis.

So that's like 30 grams or more of animal protein. Then you have another, you know, 2 hours, then you go work out. That would be like perfect world if that can work for people.

And to do that and then, you know, it's very interesting on all of like when should you eat and the re feeding and all of that. And it's very nuanced.

It becomes important in the more sedentary people as they're first starting and then in the very elite. And so the reality is it's really not as important for most of us as people seem to think it is.

I think sometimes we tend to major in the minors when we really need to major in the majors. And what are the majors?

Losing fat without losing muscle

Get that resistance training in for each of your body parts at least twice a week. Push yourself so you get as close to not be able to do another one as possible.

Make sure that you're eating protein to support your your body's ability to build muscle. What does that look like? It's somewhere between 0.7 to 1 gram per target body weight.

And this has been I've like dug through all the research, Dr. Stu Phillips, Dr. Donald Layman to find these things. It is double basically the RDA. The RDA was based on 18 year old guys, you know, and nitrogen excretion.

It's like it's such outdated garbage data and then making sure that you really get that good first morning break the fast thing. Now I am not depending on the age because diets are tools and so we have to use the right tool, right.

I do think time restricted feeding is important. I think that it's actually how we used to eat and that we need to get back to. We should be eating in a 10 to 12 hour window, maybe an 8 to 12 hour window every day.

That's what we used to do. Like when I grew up, you did not wake up immediately, you know, eat, then have a snack, then have lunch, then have another snack, another snack dinner and then a snack before bed.

Because God forbid you get hungry. I mean, when did we start this continuous feed? Well, we started that during the eighties when they took the fat out of the food because that was bad.

That's when all of this obesity thing started to go sideways, right? We went super plant based. We took the fat out and ultra processed food and just created a mess.

And we really created an obesogenic diet, which is low protein, high fat, high fat, high carb. That is a recipe for obesity, you know, so the first thing so if you think about eating quality protein, which let's say if you're 100 and £120 person and let's say 130, that's probably somewhere between 100 and 130 grams of protein a day, getting 30 to 40 grams in that morning, really focusing on your bumper meals of morning and evening, making sure you're getting enough and then getting some in at lunch.

But again, those ones that the evening will set you up to not go into muscle protein breakdowns quickly and the morning will set you up to break that overnight fast and the muscle protein breakdown getting that in and then getting in quality carbs.

I wrote a book called Sugar Impact Diet to really help people understand that, you know, all carbohydrates turn to sugar. You just want to make sure you're making that slowly from the food you eat, not mainlining it.

All right. So things you know, there's a big difference between eating lentils and blueberries versus eating French fries, which is obvious. So making sure that you eat and I hope people eat protein first because turns out if you eat protein first, you make better food choices and you'll make sure you get your protein.

And it's so much more satiating. You know, it's interesting protein, the thermic effect of protein is about 25%. So that means that you're going to expend somewhere in the neighborhood of 25% of those calories in the digestion and stimulation of those calories.

And a lot of that in that muscle protein synthesis, expensive fats, negligible like 3% or less, carbohydrates, like 5 to 10%. So if all you did was look at your diet and go, I'm going to eat protein first, which is more satiating and have better blood sugar control.

And that's going to make me eat less next time I put in my non-starchy vegetables, a little bit of of fruit, but things that are like low sugar impact like berries.

And then look at how much fat I got in my animal protein. Maybe add a little bit of olive oil or something in my cooking or on my salad and then see where you're at, you'll be full.

That's the you know, that's the great thing. And if all you did was if you were eating the same amount of calories you are right now, but you pushed out a little bit of your fat or carbs in favor of protein, you'll lose weight right there.

Well, that's fantastic advice. And in terms of animal versus plant protein, is there a significant difference in building muscle like, say, someone wants to eat beans as their protein versus and a chicken.

So that here's the challenge with that is you assume that kind of hundred grams is your bare minimum total protein you'd need throughout the day. And, you know, 30 grams at a meal that's assuming animal protein and you're not going to get the same essential amino acid.

You know, we eat protein for the amino acids. There's 20 amino acids, nine are essential and we must get them from our food. And the challenge with plant versus animals, the plants are not in the same balance you get with animals and not in they tend to be low in something like soy is low and Matthias and so they tend to be lower in different things.

You can build muscle with those. You're going to need added a higher amount of protein and you're going to have to be very careful to make sure that you're getting what you need, right?

So you have to be very got a little bit of a food scientist as you're putting this together. Now, the challenge is, let's say that you want to get your protein from beans.

To be able to do that without overloading carbs is pretty much impossible. I'll do one I know off the top of my head, which is like four ounces of chicken breast to get the same amount of the amino essential amino some protein is six cups of quinoa.

Well, you overload your day's worth of carbs doing that. And that's the challenge with when you're doing plant based, when you're in plant based, if you want to do that, you know, if you can do soy, you don't have a food and harms to it.

And it's not interacting with your thyroid function. That would be a better choice. Protein powders are going to be a way to do this, but you're going to have to supplement in order to do it without overloading your carbs.

Because the reality is, you know, I have people start with about 100 grams of carbs a day. And more than that, they need to earn through exercise. But that's where I find women tend to do well in 100 grams, maybe 130, if they're really exercising a little bit more than that.

I start fat at around 60 grams and then we'll play around with that as well. So that's kind of my foundation and I see where you do best. We either are going to bring up the carbs or we're going to bring up the fat, but we don't bring the carbs and fat up together because that's a recipe for weight gain.

Right. And so, you know, that's my concern with a plant based diet is I don't know how to get you to the protein you need without supplements. Yeah. And I have quite a few patients who are vegans, so it's, you know, challenging to get everything balanced out with them in terms of the supplements, the shakes, the supplemental shakes.

If someone wants to use a shake for a protein as a right after workout. And do you recommend that using a protein shake like in the half hour after a workout?

And if they did and they were open to not having just a vegan like a rice or a pea protein or something, do you recommend whey protein or do you do shakes or that's sort of like a last resort.

What do you think? I person I do shakes every day. I love shakes. So here's here's some of the options now that anabolic window like there's just still so much controversy around that whole thing.

But you know, after you exercise, it is the time where your carbohydrates will go into your muscle without the need of insulin. So that's super cool.

Protein, shakes, recovery, and supplements

So I love some carbs and protein post-exercise a little bit of fat can also, you know that bile acid also helps with protein digestion. So that's cool if you do more of a blend like a pea soy blend for protein, like, you know, there was a study that came out, I can't say that satellite in front of me, but basically showed that it would be fine for building muscle.

So, you know, depending on which type, there's pea, there's soy, there's chia, there's hemp. You know, you find you find yours. But I think in Plant Kingdom you're better off doing a blend.

And I then have people cover their bases by also adding, you know, a hit of essential amino acids. That's how I cover it. I personally love shakes. If you are not dairy intolerant, whey is the gold standard?

I do a lot of food sensitivity work. You know, that was the Virgin diet. Looking at all this food sensitivity test, looking at seeing so many people reacting to dairy and eggs.

And so that was my challenge is, you know, if you've got leaky gut, this is probably not going to be a good one because the last thing you want to do is eat something every single day that's launching any kind of an inflammatory response because inflammation shuts down muscle protein synthesis.

So that would be a bummer. Right. But if you can handle whey it can be amazing. So it's just really does that work for you or not? You know, you could do a food sensitivity test.

You could do virgin diet, food testing, take it out for three weeks, see how you feel. But if you can tolerate it, it's amazing. So that's amazing. I use a bone broth, protein shake.

I have two shakes that I make. One's a pea based shake for plant based and one to bone broth shake. Now the thing with bone broth is it's 80% collagen.

This is not a complete protein. And that's what people need to understand, is that when you do that, that's not a complete protein. So if you're doing that, you, you know, doing it essential amino acid blend on the side, right.

Or use it as part of something like all stirred into a coconut with pea yogurt. So I'll do blends to get there. And that just is if you're doing more plant based, you're just going to have to be a bit of a food scientist.

And that's the the dedication and and to also look at and go, why am I doing this? Is this for health or is this a spiritual reason or what? Because if it's for health, I show me the research that shows that clean, clean animal protein.

Right. And that's the challenge. You cannot take, you know, McDonald's burgers and compare them to grass fed beef. Right. But show me this, the research, because it's not there to say that this is bad for you.

In fact, there's some great research that Trudy Scott shared with me about how important grass fed beef was for depression and anxiety. So yeah, I think there's even a little data that a little bit of saturated fat can make you happier.

So, you know, you don't want to have zero. That's I just wish all my vegans out there, everyone out there who's a vegan, you know, listen to that, because a little bit of animal or moderate amount can really help.

And, well, sometimes people are not very moderate and they get very enthusiastic. And then they have a lot of muscle pain. So I was wondering, what do you recommend when, you know, they call it like Weekend Warrior sometimes, you know, the overenthusiastic one who just does way too many wraps or whatever and then, wow, they really pay the price the next day.

Do you have any suggestions for that crowd other than don't do it again? Yeah, knock it off. Well, you know, this is your body's email system. I always say if you're sort a joint site, that's a bad one or sort of a touch and it lasts more than like a day or two.

This is a problem. Your body is like, what are you doing now? There's a couple reasons this could be happening. It was interesting, Felice. The way I knew that I was starting to go really into menopause was I couldn't recover from my workouts a minute, my estrogen dropped.

I was like, Oh, rats. So it can it can tell you that something's wrong hormonally either with thyroid or estrogen. But a lot of times it's just you're just doing too much like you're overtraining.

You're either not giving yourself enough recovery. And there's a couple of things I love. Number one, I think all women should be taking creatine. Women have only 70 to 80% of the tissue stores and creatine that men do.

Creatine helps us do that intense exercise because it's part of the fossil creatine system. So you can you can make ATP so creatine hugely important. I think all women should be on 3 to 5 grams a day forever important for your skin, for your brain, for your bones.

So creatine for the win. I also really love electrolytes. I think that we should be doing some electrolytes, like take a big thing of electrolytes and water when you go to the gym.

Not with sugar, no sugar. That's important. But then also do those things that help with recovery. So couple of things that can be helpful. I have at home a cold plunge.

Yes, this is it's it's I have a love hate relationship, my cold plunge. And this is a great thing. You don't do it immediately after exercise because actually it can limit your results because it's that potent of an anti-inflammatory that it can actually then stop the inflammatory process that happens after you work out that you need to have happen.

So you don't do it for at least 6 to 8 hours after working out. But a cold plunge or a cold shower can help reduce inflammation. I love foam rolling to help just get the blood flow going doing light versions of the same movement.

Like if I'm sore, I will go and do the same movement, but without any resistance, just get the blood flow going. And then Epsom salts. Baths are another big, amazing, incredible one too.

That can help a lot. What an amazing array of advice you have given during this interview. I can't thank you enough. I always talk about the importance of muscle and I love that you really explained it.

You know it's so much detail about how to make store replenish and you know just do everything to nurture our muscles are so vital and the whole the whole area of fitness that you have really explored and explained.

And I can't wait to see when your book comes out because you had share that you're writing a whole book on this topic. That'll be fantastic. Now you've already written so many amazing books, and I know so many of the viewers out there want to access them and listen to your podcast and, you know, see all the other amazing things that you have produced.

So how can they follow you? How can they access some of this? All of that is at JJVirgin.com. I mean, I've got well beyond 40 that you were a huge hit on, by the way.

And yeah, I'm very active on YouTube and Instagram as well. And then we have a lot of recipes on the website, so that's super fun. If you like to cook or if you like to be what I call I'm a lazy cook, so I like simple recipes.

You will love our recipes. They're fabulous. Well, I love to eat. I'm going to give them to my husband to make. But my husband cooks to. Well, this is wonderful that you have been able to find this time because I know how incredibly busy you are to share your incredible knowledge with all of our viewers out there.

And I hope you'll take this all to heart and listen to this interview a few times, because there is so much information packed into it. So thank you again.

JJ It is always a pleasure to have an opportunity to speak with you. Thank you.