

# Dr Soko clip met flex

**Dr Mike T Nelson:** Thank you so much for being on the podcast and listening here today with Mr. Now, Dr. Chester, how are you, sir?

**Dr Chester Soko:** Good. Good. Thanks for having

**Dr Mike T Nelson:** me. I appreci. Yeah. Thank you so much for being on the program and congratulations to finishing your PhD, which I think happened officially relatively recent, correct?

**Dr Chester Soko:** Yeah. About a month ago, I

**Dr Mike T Nelson:** defended. Nice. And Dr. Ormsbee wasn't too hard on you for your defense Uhhuh?

**Dr Chester Soko:** No, he was pretty good. He was pretty lenient. I am I'm starting a postdoc under Dr. Ormsbee as well. So we're gonna have a long,

**Dr Mike T Nelson:** oh, nice. I didn't know that. Yeah, it's gonna be awesome. Cool. Are you studying something similar in your postdoc or something different?

**Dr Chester Soko:** A little bit different. I'm still working with females. My dissertation was in the impact of binge drinking in resistance training on young adult females. And now we're gonna focus more so on fat metabolism in postmenopausal women. So we're gonna look at essentially what is more effective to improve markers of health and improve fat metabolism.

Is it endurance training? Your aerobic activity, your cardio, or is it resistance training? And we wanna see after 12 weeks of either endurance training or resistance training, what measures are affected and maybe which is the better choice. If you're gonna allot, three days a week for exercise, what should you do to get the maximum benefit and return for your time investment?

**Dr Mike T Nelson:** And my benefit there. Are you looking at body comp? Are you just looking at purely fat oxidation?

**Dr Chester Soko:** All the above. I've got a whole, whole host of measures insulin sensitivity, fat metabolism, body composition. We have so many

measures in this R one that we're gonna be looking at and I'm tasked with the applied portion.

So getting the recruiting and the women to

**Dr Mike T Nelson:** exercise. Awesome. I think I talked to Dr. Ormsbee about that. He said he just got some R one funding and he was telling me the amount of catheters and probes and shit. They would have stuck into people, which sounds pretty awesome for geeks like

**Dr Chester Soko:** us. yes, it is intense.

One of the days measurement days is about eight hours. Ooh, of testing. Yeah. So we have some great participants who are gonna. Through

**Dr Mike T Nelson:** that fun stuff. Are they doing an insulin clamp as part of that too? Or are they just yeah, that's what I thought he said too. So for listeners who are listening to, what the hell are any of these people talking about?

so an insulin clamp in layman's terms is you stuff an IV in one arm stuff, an IV in the other arm, and then you just whack a shitload of glucose and insulin at the same time. So you're elevating everything up. lot of times they'll do it as what's called a euglycemic clamp. They'll just leave glucose as quote unquote clamped, meaning we're trying to keep that the same level.

And they'll use that as a marker for, it's been argued if it's useful or not useful, cuz it's so super physiologic. But to me it's fascinating just to be a benchtop test of what is the extreme end of someone's metabolism without having to do exercise, I guess is how I think about it.

**Dr Chester Soko:** Yeah, I'm excited to to see the results and personally I'm rooting for resistance train to be a little more effective. Yeah. Just because my meathead background, my meathead bias. So we'll see. At the end of the 12

**Dr Mike T Nelson:** weeks though. Yeah. We all saw how speedy you were to run up at the ISSN and get your award.

So you're definitely more on the resistance power end of the spectrum for sure.

**Dr Chester Soko:** yeah, I I think I did leg day or something, previous to that about,

**Dr Mike T Nelson:** yeah. Awesome. You'll have to be back on once you get more into that study. Cause I think that's definitely an area. I know. I get a lot of questions.

I've attempted to poke around a little bit at the literature, which I don't know. It's all across the board right now and it's cool to see more studies actually being done on female physiology. I think we'll find a lot of stuff is similar and obviously we're gonna find a lot of stuff is gonna be different too.

And then right now there's just a general kind of lack of data in that area. So it's, it'll be fascinating.

**Dr Chester Soko:** I agree. And especially it's important when we do this research to highlight the distinct populations in the hormones, your menopausal, your per menopausal and your post menopausal, excuse me, premenopausal per menopausal postmenopausal, because those are three unique populations that each one needs their own special attention.

**Dr Mike T Nelson:** Yeah, my hypothesis, which I don't have any data to back this up is. My guess is post-menopausal women will be similar to male physiology, but pre and Perry might be different. And then we can split hairs on, is it different enough to dedicate, like you've probably seen, training for wherever particular cycle you're in.

Eh, I haven't been overly impressed by that data, but there's just not much of it. I tried doing it years ago with a few female clients. And in all honesty in practice, it was a fucking disaster. Cause like every email was about like their cycle and this, and I'm like looking going, yo you're like at 80 grams of protein today, let's maybe go back and just not drop all of the basics and I get it.

Like you get interested in something and then you become hyper focused on that. And then other stuff falls by the wayside. So it's yeah, it'll be super interesting. I dunno if you have any bias or hypothesis in that area yet.

**Dr Chester Soko:** Not particularly, but I do agree with you in the fact that as researchers I think we over science, some of our athletes, we over science, the coding, and I think that it's best to let the athlete autoregulate.

And personally, when I coach or when I instruct people, I don't manipulate training or nutrition too much based on the cycle really at all. And I just go with what the athlete is feeling and the communication between that. And typically it's not different throughout the cycle.

**Dr Mike T Nelson:** Yeah. And I have some stuff where females are like, we'll monitor scale, weight daily, and they're like, oh, you know this part of the cycle. I know I usually go up two or three pounds, which is good to know, because at that point you're like your compliance was good. Exercise is good. Heart rate.

Variability is good. And I know that happened during this week. And I know the scale went up two pounds. I'm not gonna freak out and be like, oh my God, let's crash your calories because you're not losing fat. Cuz you're just using scale weight. So I think a lot of those things aren't useful to know, but like you said, I've talked to a lot of, even a lot more advanced coaches and I can't say I found one yet that has a female athlete dialed into a gnat's ass where like their schedule is gonna be useful in terms of predicting and setting up different training and different nutrition ahead of time versus, just reacting to whatever is going on with them.

**Dr Chester Soko:** Yeah, I agree. And I think that at any point in the cycle, if you do too much volume, you're still gonna be susceptible to over training. So I think that there's just larger variables that are gonna dictate how you're feeling, training volume nutrition, intake, sleep, quantity, sleep quality.

I think those are the variables that you have to more so go off of an autoregulate based from rather than a specific point in the cycle. I just think those are gonna be larger factors that are gonna dictate your mood, your performance and ultimately your

**Dr Mike T Nelson:** results. Yeah. And as dudes, we're not saying that this isn't a thing and it shouldn't be researched at all.

You're actually doing research on it. I think it just begs the question of, we may find something or you may find something and you're study in the future that shows it's statistically significant, meaning that, oh yeah, this is like a true effect. But then the next question is what is the. Effect size of that.

If you employ enough people in a study and you have enough money, you can find some pretty tiny effect sizes. And does that, like you said, negate a whole bunch of other stuff. Probably not. We have a whole bunch of other things, overload, nutrition, sleep that are gonna be much, much higher effect sizes at the same time.

So I think sometimes when things are new and exciting and I'm, a hundred percent guilty of this at times I get a little bit too excited about stuff. And then I

try to shoehorn it into all my programs. And the reality was, yeah, maybe only two people maybe needed that or maybe didn't even need it at all.

**Dr Chester Soko:** yeah, I agree. There's just so many variables that do influence and I do think it's a piece of the pie. But I think we definitely have established, researched larger pieces of the pie training volume, sleep elements like

**Dr Mike T Nelson:** that. And on a side note, do you measure recovery in any of your athletes?

Do you look at like performance? Do you use R P E do you use heart rate variability? How do you I guess gauge the difference between one athlete versus another? One thing I've noticed and have probably noticed more, the longer I've been working with clients, even just something as simple as volume tolerance, which we could argue about what is the exact definition of that.

But pretty much anyone who's worked with athletes or even high level clients have found that, on paper wow, this client should handle a lot of volume and they just, I don't know, they just don't do as well or other clients I found like they can handle just a crap ton of volume. And oddly enough the client I've had in the past, who has the record for at least the system I used for volume was Erin Elliot.

She was up to doing seven sets a week of exercise. And I was having her send me, videos of like her form at the end. It was. It was pretty damn good. So it wasn't like the quality was just, eroding. So I thought that was interesting if you're looking at even male and female physiology that, she was doing really good on volume and doing twice as much as some other guys, granted, she was a very, high level experience competitor too, had been doing it for, many years also.

But just curious. So how you would try to figure that out in what system do you of use for.

**Dr Chester Soko:** I'm old school with it. I like assessing muscle damage through recovery, through performance recovery, and particularly of strength recovery. I am a fan of keeping reps in reserve. I typically don't take the final I'm.

First of all, I specialize more so in hypertrophy training and aesthetics that's my general background. But I definitely am a fan of keeping reps and reserve. I

typically don't take a set or recommend taking a set to true muscular failure unless it's the last set of training, a specific muscle group.

And then in general, the strength recovery are you on point with your diet, are you getting, at least energy balance, are you sleeping enough? And if those things are too, pretty good. Then the strength should be progressing. And I think if you have a plateau for longer than two weeks, or you're just not getting over a hump, then we could have too high of volume and might need to restrict for that specific muscle group.

I also think each muscle group is distinct and individual. I think the amount of volume you can do on biceps and triceps is a little different and that's different than quads. And I also think you need to consider the CNS element, the central nervous system and how demanding each of the exercises are, a set of squats and a set of bicep curls.

They're not comparable on the CNS, on the central nervous system on the stress. So you also in factoring, in the strength, you need to consider just talking your athletes and how are they doing from a mental side of things? Are they still enthusiastic to train still excited to train? I think combining those hard objective strength outcomes with some of the more subjective outcomes, I think that's the sort of.

My approach to tracking an athlete and to see if the progressive overload is working and if they're getting too much or if they're getting not

**Dr Mike T Nelson:** enough. Yeah. I like that. Cuz even if there's a handful of physique athletes I've worked with or currently work with the, I think the biggest paradigm shift for some of them was that like, oh you're actually really tracking strength.

I'm like, yeah. And but my goal is like hypertrophy. I'm like, yeah. Cause at some point, if you're in a caloric surplus your recovery is not absolutely just dog crap and you're getting stronger. Even if you're a natural athlete. At some point you, you almost have to get bigger. You.

Infinitely get stronger without adding some size. And again, I think there's a huge amount of variability in that and the type of training you need to do and a whole bunch of other factors. But like you said, on the things we can measure like week to week I think you'd be even hard pressed if we jammed you in an MRI, like one week and three weeks later to even see any difference.

Maybe muscle biopsy maybe, but then how does that translate to overall size in your bicep? Ooh, the fiber got a little bigger, but I don't know, like what does that mean? So I think tracking strength is an underutilized approach, even for hypertrophy.

**Dr Chester Soko:** Oh, I think that's probably one of my biggest mistakes is not tracking strength when I was younger and not really caring about performance.

Cause it's ah, I just, I wanna look good. But I don't really care about performance or, getting stronger. I don't really wanna be the strongest one in the gym, but I think strength is more so an assessment and a reflection of muscle damage. Your strength should be increasing and if it is not your and you're eating, at least energy balance and getting your sleep in, if your strength is not increasing, I think you have you're overtrained, you're doing too much damage.

And muscles grow best when damage is lower, the protein you eat is gonna go towards adding new mass rather than repairing your old damaged mass. So tracking strength, making sure that is going up, mildly quickly, that's an indicative of low muscle damage and low muscle damage is gonna be associated with your best hypertrophic outcomes.

So I think the strength measures need to be tracked. You need to record your workouts, a logbook, I'm coming out with a, an app. You can record workouts and track your progress in the app. But all athletes, I think should hyper focus on their performance, even the physique athletes. And I think that even if you don't care about being the strongest person in the gym, it's just gonna be a reflection of your program.

Is it working? Are you progressing your overload? Are you doing too much? Are you doing too little? And those are the key things that, that, again, all athletes need to know about.

**Dr Mike T Nelson:** Yeah. I hundred percent agree with that or preaching into the choir here. And if you, even, if you look at top natural athletes or top, in hand body builders, whatever population you pick, almost all those guys and gals are like stupid, strong are they pound for pound as strong as Olympic weight lifter for, force production?

No. Are they as strong as a power lifter? No, but compared to most people, I can't think of almost any exceptions and there's a huge range, within that. I think it was even Jay Cutler was out of video. I don't know, couple weeks ago, it's probably an old video. This is how much I spend time watching some of this

stuff, but it's fascinating to listen to cuz he's yeah, I don't use bench press much anymore.

I don't think it's that great of a mass developer. And everyone's oh hearsay. But then later in the video you realize that I think he was benching like 405 for reps in high school. You're like, yeah. For you at that level, it probably isn't. Yeah. But for most people like. Myself when I started and got crushed by an empty bar in high school, like it's probably, if it's done effectively might be useful.

**Dr Chester Soko:** Yeah. And I think I'm a fan of power building. I think all the greatest, most massive physiques were built with a good strength foundation, Ronnie Coleman and his deadlifts, Arnold Schwarzenegger and his bench press Tom Platz and his squats. This is the biggest chest, the biggest back and the biggest legs.

And I don't think it's a mistake or an accident or coincidence that they're very strong at these lifts. So I think a good strength foundation, it's pretty easy to track, a few compound exercises strength, those in particular, your dead lifts, your bench, press your squats, your hack squats, your shoulder press definitely track strength in those measures.

And I think it, it won't be a coincidence if your strength dramatically increases in those lifts and your muscle hypertrophy and those specific muscles, it gets a lot bigger.

**Dr Mike T Nelson:** Yeah, I think that's one thing I talked to Kyle Dobbs about this on a podcast. So I'll try to link to that. There's a time and a place to do.

If your only goal is physique and hypertrophy doing, highly advanced isolation exercises, LA pull down, tating as you pull it with left hand against a branch split stance, God knows, whatever. Yeah. There's definitely a time and a place for that too, but, I'm, I agree with you that, eh, if you can't do a fair amount of pull ups or chin-ups, we can argue if that's the best LA developer or not, or bent over row or deadlifts or things where it may not be the main exercise, even farmer's walks, depending on your risk tolerance of injury.

If you get really good at those movements, you're gonna be able to do isolation work relatively easy, or you can add it on later. And I think you'll get a lot of benefit from it. It's the old thing where, and I made this mistake early on. Did just mostly leg press for lower body. And the first time I ever went to squat, I was like, wait a minute.

I thought I was somewhat strong in the leg press. I was never ridiculously strong by any means. And I felt like I'd never used my legs in my life, where you take someone who can squat a decent amount of weight and you put 'em on a leg press within a couple sessions. They're doing pretty good. So I think those big kind of compound exercises have a high amount of transfer to isolation.

And some of the isolation stuff doesn't necessarily transfer back to the bigger compound lifts.

**Dr Chester Soko:** I agree a thousand percent and I think you're gonna get so much more return on your investment doing your basic compound lifts. I think also if we just kinda look at the physiques throughout time, seventies, eighties, nineties, nowadays, a lot of people would argue that the physiques back then are.

Than the physics now. And what were they doing back then? They were doing the basics before you had to invent new exercises to entertain people on social media. You were just doing your basic, bent over rows deadlifts pullups chin ups. That was your bread and butter. And your meat potatoes.

Nowadays. I feel like you, you want to tune in, you wanna be entertained on social media. So you're not gonna keep tuning in. If somebody is doing a deadlift with 600 pounds this week and 605 pounds the next week, and then 610 pounds the following week, you're just gonna be tuned out. So you wanna be, see new things, new exercises.

And I think the return on your investment from those is not gonna be as good. And once again, I think we see that throughout the evidence of time and that the physiques nowadays, they're just in my opinion. And a lot of people's opinion, they're not as good as literally the classic, the golden era, the nineties bodybuilders.

Just the more aesthetic physiques where I think you did have that higher emphasis on the basics.

**Dr Mike T Nelson:** Yeah. To me the video, I still remember the most if I picked, so I have in my head I'd segregate eras between like fifties to seventies, ish, maybe early eighties, eighties and beyond, and then newer stuff.

And then pre 1952, Diana Ball was what, 1952, 1954. So you've got just different methods and chemical enhancement versus not, but at least in the late eighties and nineties, I remember when it was the Dorian did the, was the

European grand pre I think the old kind of just shitty video of him walking out on stage and doing like his back poses.

And I was like, what the holy hell is that ? Yeah, that was like the first time I was like, Blown away of something that you hadn't really seen that level before at that point. And some people may argue, yeah. Maybe it's not even newly matched by, a current day.

**Dr Chester Soko:** Yeah, I would agree a hundred percent.

And I think, how did Dorian get beat? It was Ronnie. And what was Ronnie doing? He was deadlifting he was doing bent over rows. He was V-Bar rowing. He was still doing the basics. Yeah. And eventually I just feel like social media has created a need to invent new exercise. And I honestly think some of those basics that we just alluded to, they're really hard.

The deadlifts, the bent over rows, the VBar rows, the VBar rows and dead. That is demanding. I think it's so much easier. If you do, ice over isolation, one arm, overhead, supinate, this supinate that invent new cable pull, it's just easier to do some of these newly invented exercises rather than kind of bang on those old school.

VBar rows deadlifts. And I think at some point people want to be entertained and they also want maybe a shortcut or the easy way out from going over sort of those really hard bent over barbell rows, which are not a lot of fun. Pullups not a lot of fun compared to some of these, fancy Gidget gadget exercises.

And I just, once again, you see it in the quality of the physi, you see who's putting the work in and you see who maybe wants, the entertainment or the easy way out and not grind for those results.

**Dr Mike T Nelson:** Anyone who's done exercise at all. I think there's a time and a place for cable stuff, but oh yeah.

Yeah. The sensation of it's just completely different. You can't really torch yourself systemically with a cable. I just don't think it's possible. Like you compare any cable exercise to like a set of 20 for trap bar deadlifts, it's like you're in two different universes at that point.

**Dr Chester Soko:** I agree. A hundred percent. Your foundation has to be established. And a lot of people, they look at the social media and they see these, really high level people. Maybe we talked about just Jay Cutler and that

previous example, oh, I don't think bench press is a good mass developer. Look at your foundation.

Yeah. you mentioned 4 0 5 for reps and your teens. Yeah. That's your foundation. That's what allowed you to play around with some of the other stuff and, still have that results. You had that base in the basics. That, that, fundamental structure rooted in the basics.

And that's what I think allowed maybe these freedom. And also, I think when you look at, the social media elites, the genetic monsters, their margin for error is huge. Yeah. I They will respond to so many different elements, whereas, if you're not, hyperresponsive resistance training, it's much more challenging.

And I also think that emphasizes the need for, if you don't respond as well to track your strength, track how you're feeling, cuz those are gonna be the key variables to determine if muscle damage is high or low. If you're doing too much too little, your attention to details in particular your strength variables, some of your objective and subjective outcome measures, you just gotta be, have that heightened focus.

And again, those genetic elites, they just more leeway for error, more. Freedom to do essentially what they want in terms of workouts, in terms of recovery, in terms of tracking in terms of all the details that maybe they don't have to perfect like you do.

**Dr Mike T Nelson:** Yeah. And I think that's easy to forget that you're looking at the elite of the elite and some of 'em obviously work harder than others.

We're not taking away from any of the work that's involved to get there. But if you don't have the same, genetics or even, supplements, et cetera, like you can't expect that what they're doing once they're at, the top 5%, 1% 0.0, zero 5% to work for you when you're starting either.

Those are two completely different endpoint. And I remember a buddy, I'll may nameless, but he used to train it back in the day at the same gym that Paul Dewett trained at. Yeah. And he would say that , he's. He was like, in his opinion was like one of the biggest genetic freaks he ever saw cuz he was at the same gym he was at when he prepped for his Olympia debuts and everything.

He's yeah, he'd come in. He was literally doing press downs with 40 pounds, like how does this even register? Like he wasn't really hardly any full range of

motion. He's like his loads weren't even that heavy and. He looked like that. He's I don't understand anything anymore.

**Dr Chester Soko:** yeah. I think a great way to look at some of these, people who are at the top echelon, try to find pictures when they were teenagers or in their twenties when they were, potentially natural or barely into the enhanced field.

And you'll see that even as teenagers or in their young twenties, they were just units. They look like dudes in their thirties who have been, on steroids for a decade. Like they're just incredible responsive beasts. So before you take advice, for people listening from anyone on social media, try to find what they looked like before, , famous and how you know them now.

And I bet you'll still find, I know there's a picture of Chris Bumstead when he was natural. Yeah. And he still looks like a 30 year old, probably could have an IPV pro card in men's physique, in his teens. Like it was just nuts how elite these guys are and how the genetics show themselves at such a young level.

**Dr Mike T Nelson:** Yeah. And people forget, Ronnie Coleman did probably his first show natural. Ky green was a natural competitor for a long time with an extremely impressive physique. Nowhere near to what he was later, but still, extremely impressive. I remember the picture of Lee priest when he was 18.

I guess he had been training for four years at that point. And you're like, what the hell? Could just walk on stage and probably do pretty damn good. Obviously he did better after that. I remember him in a video just bitching about all the muscle magazines were like, yeah, we need another arm training from you.

And I can't do an Australian accent, but, and he's I've been doing the same goddamn thing for 20 years. He's I've always had good arms. He's I don't really train him that hard at all, but he just had freaky development. Of course. So everyone goes what did you do for that? And he's I didn't really do a whole lot.

yeah. He's but that's not the answer they want to hear.

**Dr Chester Soko:** yeah, Tom Platz had something similar. He's he's don't ask me how I grew my legs and calves. That was just squats, hard work leg extensions, but ask me how I grew my arms. Yes. Ask me the muscles I struggled with and I think that's another good space when you're looking for advice.

Don't ask the people who've had the easiest road ask the people who've had to learn through trial and error through reading the science. I feel like that's a great way to expand your reach. I think that sort of a new concept going, stretch media, hypertrophy and me personally, I struggle tremendously with my arm growth, but I've seen more arm growth doing stretch media hypertrophy, exercises that put my muscles in a more lengthened position, lower muscle damage.

So lower volume things that I've had to adapt and not only just read the literature, but also have that experiential knowledge that I think is very important to muscle growth. So blending those two things and finding a coach or, someone who's giving advice, who's just not had the easiest road.

I think that is gonna be advantageous. If you're looking for quality advice and you probably have similar shoes. If you might not have had the easiest road to develop a particular muscle group,

**Dr Mike T Nelson:** And also asked coaches and trainers, like who have they worked with and what have they done for them.

And so the analogy, I, a hundred percent with what you're saying is, Bill Belichick is probably arguably one of the best NFL coaches, but if you saw him on the street, you're like, Huh football coach like, and you don't know anything about the sport because to coach it at a high level is completely different than he's not gonna run out in the field and try to catch a pass.

Obviously you want some experience. You want some background, but at the end of the day, you want to be more. Interested in who have they coached? Like you said, where did they start from? Where did they get to is gonna be a better indicator than, oh wow. They look good naked. They must be a good coach.

**Dr Chester Soko:** yeah, I agree. We talk about the pyramid of evidence, we got our peer reviewed, we got our randomized control trials. We got our meta lyses and above everything. There's looking good. Shirtless on Instagram. Yeah. the ultimate hierarchy, but yeah, I think that's super important.

Like somebody has to be involved in the research. And also when you do look for people, you look for information, are they involved in the research? And then also maybe what are their potential biases? I think that a lot of people do have biases and they don't wanna be proven wrong. Or maybe they're trying to sell you something.

I know glued activation, is a tremendous tool that people can use to sell glute bands and things like that. So where are the potential biases? Not just, are you looking at the research? Where are you interpreting the research through a clear lens and then sort. Giving that information back without slanting it a particular direction to try to get people to, to buy something that maybe they don't

**Dr Mike T Nelson:** need.

Yeah. And that's even hard now because, and I'm a huge fan of, science education on Instagram, whatever method you want to use. I think that's great. But I think there's a little bit of a trend where consumers are like, oh, this person has some sort of credential, whatever it is. Ooh. They set a mechanism, oh, I must need this thing then.

It is almost like everybody's looking for the shortcut. And it's if you mention any mechanism, like my favorite one is anabolic fasting. Oh, this must be a great program. He's using anabolic fasting. I'm like, those words don't even make sense together. Yeah. But, oh, it has a mechanism. Oh, it's mTOR and AMPK.

Oh, cool. Yeah, that, that must be. It's like, eh, sometimes it is right. And there's obviously very legit things to fasting. There's the legit things to anabolic processes, but there seems to be a mashup where we just wanna throw out a mechanism and then all of a sudden everyone's oh, this is the next thing

**Dr Chester Soko:** yeah.

I think at the end of the day, whoever you're, you are getting that advice from, make sure you can understand it, make sure they're explaining it. So a third grader can understand it and that's not to insult anyone's intelligence. Yeah. Yeah. But just make sure it is so basic, so fundamental and you could grasp it and almost explain it to somebody else.

Even if science isn't your forte or research, isn't your forte. You should be able to understand it well enough to potentially explain it to somebody else. And if somebody can't teach you that, if they're throwing huge words at you to sound essentially overly sophisticated and overcomplicate something simple.

I think that maybe that might be a sign. They could have some potential bias or maybe they don't know what they're talking about themselves. If they just can't simplify extremely basic or well, should be basic topics.

**Dr Mike T Nelson:** Yeah. Within that you always wanna ask, what is the context? Are you talking about trying to get an elite athlete to, their best 100 meter time in a sprint or physique athlete trying to, add half a pound of muscle to their, their chest or something, or, eh, Bob whose butt looks like a couch cushion and he just needs to start walking around the block.

And I think the context just gets dropped all the time. And that's where I see a lot of the comments and arguments and all that stuff come in, even something simple as, are you talking about healthy people? Are you talking about like Frank pathologies or where like shit's all screwed up, right?

I Those might, elite level physique humans compared to a guy who's a metabolic train wreck are almost. To completely different worlds again, and some stuff that works for one is like the complete opposite for someone else. It's if you're a borderline type two diabetic, you don't move at all.

Your sleep's a disaster, you eat 40 grams of protein a day, then. Yeah. 400 grams of carbohydrates. Probably not gonna be a good idea for you, but if you're training hard, if you're lifting, I've got, several athletes that are well over 400 grams of carbs a day and they still have apps. Yeah.

So people want to go, oh, it's the carbs that are bad. It's no, what are you talking about? What population

**Dr Chester Soko:** here? Yeah. I think population and research is tremendously important. And I think that our job as practitioners is to blend PubMed and practicality and also, make sure our person our client, they know which population we're talking about.

For example, you use the example carbohydrates. I always teach sort of a sugar example, is sugar bad? If somebody is insulin resistant, sugar is definitely not good. But if somebody is an athlete, expending an incredible amount of energy, sugar, especially intra workout carbohydrates that can be fantastic.

That can improve performance that can make your life easier. So the population that is discussed in research should be highlighted by the practitioner giving advice because it makes a huge, incredible

**Dr Mike T Nelson:** difference. Yeah. I remember John Bardi saying this years ago talking about context and he's people ask me all the time.

Peanut M and m are they good or bad? He's if I'm strand on a desert island, and the only thing I have is peanut M and Ms. He's that's pretty good. He's if I'm at home or I have other options, he's yeah, peanut and M and MSS. Probably not at the top of the list.

**Dr Chester Soko:** yeah, I agree.

A hundred percent.

**Dr Mike T Nelson:** So let's talk a little bit about nutrient timing. You mentioned carbohydrates during training. What is your general thoughts on it? I've God, I've gotten back and forth on this topic so many times, and for people who've been around the industry long enough, we probably remember like the nutrient timing book, which was John Ivy stuff.

And I remember reading that and going, wow, this is amazing. And then five years later, rereading it again, going, wait a minute. These aren't strength training athletes. These were mostly endurance studies. Once I went back to formally study that area and then fast forward, there was some, negative feedback against that.

There's been a handful of nutrient timing studies done, Paul CRI did one of the early ones. Hoffman's done one. It was probably four or five, six that have looked at exclusively nutrient timing and more of a lifting population. You might have more studies than that now. But. My general thought is, eh, you can have carbohydrates and protein before lifting.

Great. Have some after. Cool. I don't think you need to time it down to the Naas again, but it just seems like the industry wants to say nutrient time is like the best thing ever or, oh, it's worthless. What are you doing? Having a protein shake after training you dumb idiot. Haven't you read anything on PubMed?

yeah, it just, I definitely seems like it wants to go one direction or the other all the time.

**Dr Chester Soko:** I definitely think you, your pre-workout and your postworkout protein and carbohydrates are very important. And then I'll touch on intro workout carbohydrates for lifters. I think it depends. And research is all over the place on this.

Yep. First of all, here's where we talked about our population makes a difference. If you're untrained. You're not gonna be pushing max performance,

regardless if you have carbohydrates or not, you're just getting used to your body. And if you have an extra 10 grams of glucose, that's not gonna allow you to dig any deeper and push further than you otherwise.

Would've been able to push cuz you're not really sure how far you can push in general, cuz you're just like a puppy you're getting used to using your body. So I think any inter workout carb study. An untrained population or a recreationally trained population. Won't really have any benefit. If you are an elite resistance trained athlete or you're looking to become elite, you're looking for that edge.

Then I think that intra workout carbohydrates can have an incredible advantage. And I'm not talking about like spare muscle glycogen or spare little glycogen or anything like that. I think the mechanism is activating reward centers in the brain and that has proven that it can potentially increase your high quality volume.

You can dig a little deeper you can improve your performance. So I think if you are looking to take the next step in and you already know your training hard, you already know you're pushing outside of your comfort zone. I think your intra workout carbohydrate. Can be fantastic, especially if your workouts are lasting more than an hour or especially if you use long intervals, which I recommend, I think sometimes the inter workout carbohydrates just kinda help you keep your focused and alert.

Whereas your mind can maybe drift a little bit and I think the body's gonna go where the mind takes it. So keeping your mind engaged, keeping glucose, keeping reward centers activated in the brain that can translate to good performance benefits. If you're at the top of the game and pushing close to, or outside of your

**Dr Mike T Nelson:** comfort zone, and you think some of the CNS potential stuff is that from some of the mouth rinse studies that have looked at it where they've a lot of times this is higher endurance performance, but they've given people like a carbohydrate drink, but don't swallow it, then spit it out.

And then they've tried to replicate that with like sugar free drinks and, trying to look at okay, the taste sensations, like you mentioned, oh, carbohydrates are coming in. Then the brain goes, Ooh, carbohydrates. Yay. Maybe we increased performance, but the actual substrate wasn't there doesn't go through digestion.

So it's a way of trying to tease out mechanistically what might be going on.

**Dr Chester Soko:** Yeah, I agree personally, just I'm old school, practical side of things. If you're gonna drink a gatorade I do a Gatorade with a water. So I carry around two separate drinks when I train. I just swallow it cuz I feel like that would be a little bit weird if spit my Gatorade back up water

**Dr Mike T Nelson:** found or something.

So I'm just, you're the most unpopular dude at the gym now. Yeah,

**Dr Chester Soko:** I just swallow the carbohydrate drink, but I think that also could have some potential benefits. I've seen a little bit of elevation and insulin levels, not tremendous by any means. But that's an anti catabolic hormone. If I'm training, breaking down tissue and I got a little bit more of an anti catabolic, a hormone.

And help preserve my muscle. Cool. I can have a little bit more muscle protection. I can have a little bit of benefit of performance increase. And again, this is only for those who are training at or above, outside of their comfort zone. But I think that can, both of those factors can definitely be advantageous in the long run.

**Dr Mike T Nelson:** Yeah. I've noticed I've practiced for probably like the last two years of in general. I found if the session's over about an hour, if I have some form of carbohydrate during, I tend to perform a little bit better during the session, but I've noticed my heart rate variability the next day is usually better.

And that if I would really push all my training sessions, my recovery was better where I could almost get like another day of training in at the same level. Which I thought was curious and people usually then freak out and they're like, oh, more carbohydrates. What are you doing? I'm like, You're looking at, what, maybe 30 grams of carbohydrates or something that's I usually use 30 to 40, so it's not that high, you're looking at a 120, calories in a little bit more. So I think people, I don't, I think they still get stuck in this, oh, training has to be fat burning mode only. And you're putting carbohydrates in you're blunting, fat burning, and I'm like, I don't care about acute fat burning during resistance training session.

Shit. I wanna use glucose as much as possible cause I want the performance benefit from it. I want that to drive the adaptations and if I can consume a few more carbohydrates and even if I wanna stay U caloric and skip a, I don't know, half a cookie at night, I think that's a good trade off.

**Dr Chester Soko:** yeah, I agree.

A hundred percent. And me personally, I consume about 650 grams of carbs a day. My intro workout carbs. They're not very high. I personally only do about 15, 10 to 15. Oh. So that's pretty low. Yeah, do whatever you can tolerate. So if some people can tolerate more and I think that's great but some people might tolerate less.

But either, or for lifters, I think pushing the edge of those bounds, that they can be highly effective. Those carbohydrates. And then also I was gonna say something, but I forgot

**Dr Mike T Nelson:** was gonna add to that. You'll think of it. Do you, we talked about muscle damage too. And you mentioned that you're not a fan of a lot of muscle damage, which you may wanna explain a little bit more.

Cause I think that might have gotten glossed over by a lot of people and then the use of intra carbohydrates may, and this is all theoretical. I haven't seen any published data decrease overall cortisol levels. And do you think cortisol is a. Muscle munching hormone, where if we can keep cortisol within reason, lower post training, we're gonna be better.

Obviously we want some of it during training because we want cortisol to release energy. We want the performance benefit, but then afterwards, if you're just chilling out doing whatever you don't need this massive amount of energy. So do you think there's a role for carbohydrates intra and post to potentially modify cortisol levels?

Or do you think that is so far down in the weeds for most people? It just doesn't matter.

**Dr Chester Soko:** I think that people overplay cortisol acute temporary releases of cortisol are good, are healthy. They're indicative your body is working. You're physiologically, operating how you should chronically elevated cortisol long term.

That can be bad that can be associated with some, potential impaired sleep, some potential insulin resistance, the munchies, the food cravings cortisol is also pretty interesting. And that can alter where your body fat is distributed. If you have a longer chronically elevated cortisol, you might store a little bit more fat around your midsection.

So chronically elevated cortisol is not good, but chronically elevated cortisol wouldn't be caused by resistance training and acute bout of exercise. Chronically elevated cortisol might be caused by extreme dietary restriction or extreme overexercise. And this brings me to the point that I remember now from the previous portion people, I agree a thousand percent with you.

When you're weight training, don't try to burn fat. You got 18 hours a day. If you have a huge sandwich, six hour sort of window pre and post workout and or during your workout, you can slam a lot of carbs. You wanna burn carbs in that area that would be indicative that you could train at a high intensity.

You could train close to your maximum effort. You got 18 hours a day to burn all that fat or more if you want have a smaller window of carbohydrate feeding, but when you're training, when you're weightlifting, maybe, aerobic exercise could be different, but when you're weightlift take pride.

Pushing intensity and burning carbohydrates and worry about the fat burning aspect later. But you're, pre-workout your intro workout and your immediate postworkout, don't worry about fat burning, worry about maximizing muscle accretion. And if you, the leanest athletes, the leanest people in the world, they're physique athletes and they're slamming carbohydrates.

They're not really worried about fat burning they're building muscle, and that muscle's gonna be, the later engine to burn a lot of fat. So I think that's super important. But jumping back on the cortisol train people, overplay cortisol is not your enemy. Cortisol is your friend.

It's a hormone that it can be an enemy if it's chronically elevated, but cortisol in acute settings is just indicative that your body's working exactly how it should your blood. Pressure's gonna be good. You're releasing potentially those stored nutrients, you're breaking out. Some of those stored nutrients, it helps other hormones do what they need to do.

And it's indicative of that carbohydrate burning that could be occurring.

**Dr Mike T Nelson:** Yeah, I think it was back in, it was the late eighties, bodybuilders played around with drugs to try to block all cortisol because they were convinced that it was bad and evil and O it didn't go well, like the handful of like anecdotal reports were, I feel like crap all the time.

I can't figure out why. And you're like, yeah, because you don't have one of the main hormones it's designed to release energy, and then if you have any major

trauma that happens, you get in a car accident or anything like that, where you've got this massive stressor that gets dumped on your body, you potentially could die.

Like you're in a world of hurt if you blunt that to zero levels chemically. And of course it didn't help their physique at all. And hopefully that practice went away as fast as it showed up, but it just. Illustrates how people think, oh, this is the single factor we're gonna modify this thing. And we're not gonna try to turn the dial a little bit.

We're just gonna crush it entirely to zero. And yeah, that rarely. Is that gonna be a good idea?

**Dr Chester Soko:** I'd almost say that cortisol. I'm sure we've heard of like the insulin hypothesis and oh, insulin makes you overweight. Insulin makes you obese. It's almost like the analogous one. Not for the diet, but for the training is cortisol.

Oh, cortisol's the root of all evil. No, it's not. It's okay. It's a hormone that ensures that you can operate healthy and then you can change your physi, how you wanna change it.

**Dr Mike T Nelson:** Yeah. And obviously I'm biased towards metabolic flexibility, right? So if you're training, you want the ability to push carbohydrate metabolism as high as possible.

You wanna run a shit ton of things through enzyme glycolysis, all that stuff, because that's all performance based that allows you to get the adaptations you want. And then once you're done with that, you maybe you're doing some low intensity cardio, which is a whole nother debate, but just hanging out the rest of your day.

You want the ability to use mostly fat as a fuel. Like you don't need this high rate of ATP and you want the ability to switch back and forth. So that in theory, you have a better capacity to regulate body composition. You may be able to do periods of fasting you. I usually find that those people tend to respond better to caloric restriction a little bit.

They don't tend to feel quite as horrible per se, cuz yes, at the end of the day, calorie still matter, I get it. But. You're still trying to optimize or get better performance and body comp at the same time, which is gonna be a little bit tricky.

**Dr Chester Soko:** Yeah, I agree. I'm personally just my story. I'm eating over 600 grams of carbs a day and I hold abs year round and I allow crazy person it allows me to do this is the metabolic flexibility.

People, they talk about protein, spacing and protein timing. I think carbohydrate timing and maybe we call it carbohydrate, spacing, whatever is equally as important. I talked about earlier, of the, maybe you have an 18 hour window to burn fat, but around that workout, you wanna slam those carbohydrates and your lecture.

I was a student of years

**Dr Mike T Nelson:** about 40 that's, right? Yeah. Two

**Dr Chester Soko:** 18. Yeah, his sport nutrition class. And you turned me onto this and it fabric changed my life and. Why I can't eat 600 grams of carbs and hold AB year around is because of your advice and what you did. The timing of your carbohydrates in particular, your post workout.

And if we combine different elements of research, we combine the fact that you're hypersensitive to taking glucose into your muscles. Postworkout we combine the fact, sort of Felipe Damas research that the sort of protein synthesis, the ability to maximize growth is highest in advanced athletes.

About the first six hours after you lift, we have a perfect marriage between the ability to uptake this glucose and the ability to grow and growth does depend on amino acids, but it also depends on energy. And typically if you're eating a high protein diet, the energy restriction, the lack of available fuel, that's why growth is stopped.

So if we combine all this research and we look at metabolic flexibility, Having a good workout, intra workout carbs, then having some protein and carbohydrates after, especially a healthy amount of carbohydrates after I'm personally, I'm a fan of back loading those carbs postworkout to an extent that is such a great anabolic recipe to get those nutrients in your muscle and then get growing.

Then once you store that muscle glycogen, you're not releasing that muscle glycogen, you can essentially gradually get back into fat burning mode once you reduce those carbohydrates, but that timer on your workout, your pre-workout, your intro workout, your immediate post workout, especially, first four to six hours-ish don't be shy on those carbs.

They're great. So growth is not linear throughout the day, meaning you're not gonna be equally as sensitive to grow throughout all times of the day and nor should your carbohydrate intake be linear throughout the day. In my opinion, if you want to maximize your physique, you should take advantage of that metabolic flexibility in timing, those carbohydrates.

**Dr Mike T Nelson:** Yeah. In a perfect world. That's how I set up templates for athletes. And again, some of my clients are listening, going, why don't follow this template? Because as we discussed earlier, there's a whole bunch of other factors. Like you have to have all your other big rocks in place, but in a perfect world, which no one lives in it.

I like having them train. Like midafternoon, if you can have a flexible schedule, for me, this works better. This is my own bias. Cause I just feel better then. But know, one to three in the afternoon, you're up long enough, you're awake. You got some work done. You get a nice break from whatever you were doing.

And I know everyone can control their schedule, but you can have some carbohydrates a little bit before during, and then you've got this huge window after to have a fair amount of carbohydrates. You could debate how you wanna have dinner because it's gonna be so many hours removed from that. And then the next day you could have a few less carbohydrates and maybe you're doing an aerobic day.

So for a lot of those people have carbs will be a little bit lower. And then the next day they're gonna be high again, because like you said, if you stored them in muscle glycogen, the thing that depletes carbohydrates from muscle is primarily muscular work. So if you're not doing a Honda muscular work, like yes, go walk, don't be a sea slug, whatever, but you're not doing another high intensity heavy session, your muscle, glycogens really not going anywhere.

They've done biopsies thing after a 48 hour fast. And you still have plenty of muscle glycogen, unless you were doing training, if you're doing exhaustive endurance training, then yeah. It's gonna be lower. But I think people forget that. They're good about thinking about the storage mechanisms for fat, but we sometimes forget that you can store a lot of carbohydrates just as muscle glycogen.

And obviously you've got some as liver glycogen too, which does fluctuate a lot.

**Dr Chester Soko:** Yeah, I agree. A thousand percent, I think there was a new paper. It was not in 2018. And they called it, the metabolic switch and it was all about depleting liver glycogen. Yeah. And when you deplete liver glycogen, that's when essentially you can get into fat burning mode and that does depend on your activity.

And I think they, they looked at it how quickly you can deplete liver glycogen depend where you started from it's between nine and 36 hours to get an essentially fat burning mode. So I think one of the best things that you could do is back load those carbohydrates. And if you do wanna lose some weight, then you drop carbs real low and you kinda gotta weight it out.

And I know it sucks to be low carb for a while, but then you really can get into a really great fat burning mode, 9, 10, 12 hours later. And then you're just living in that fat burning mode. And that's how you can rapidly burn body fat. The trick to, in my opinion to rapidly change your physique to rapidly burn fat is knowing and understanding carbohydrate timing and using metabolic flexibility to your advantage.

And I've seen it in my physique and my client's physique. And I think it's such an underappreciated element that we can use to manipulate and change our physiques. And I know there was one study, I think it was by Louis Burke and it doesn't get the attention, but they used metabolic flexibility.

They equated calories and one group did lose more body fat because they used the nutrient timing. And they essentially did get in that fat burning mode. But it's not really talked about in nutritional realms. Cause I think they were looking at like exercise performance and aerobic training. So it just gets glossed over by a bunch of physique athletes, like ah, endurance training.

I don't wanna read the title of that, but if you look at the little sub findings huge implications.

**Dr Mike T Nelson:** Yeah, I think that might be the Marquette one, 2016 was in med sci. And what they did is they did a, this train high train, low, they were playing around with different levels of muscle glycogen was a simple over thing, but yeah, they had the exact same macronutrients.

They had one group do more of a time and approach. The other group did not. And it was endurance athletes. I think they used three markers I talked about in the flex side cert. And what was crazy is like super well controlled study, high

level lab, high level publication. It wasn't like a bunch of hoses, like putting it in, we publish anything, peer review journal.

It was pretty legit stuff. And they showed, I think it was like a two or 3% body comp change in six or eight weeks. It was not something where you're like, there's something going on there. It wasn't like, oh 0.5% eh, air index, whatever. They, another group tried to replicate that study, but they didn't use the exact same design and they didn't find the same result, which again, you could argue wasn't maybe the same design, different population, whatever.

But to me, like you said, that is like super fascinating. And the template I've used for forever is like your weight training days. Like just have a lot of carbohydrates, your aerobic days, maybe a little less. And if you really want to try to maximize muscle gain, but you want to try to maybe get a little bit leaner or stay on the leaner side.

I just incorporate a longer day of fasting. One day per week, your aerobic training that day, you're probably gonna get into a lot higher use of fat as fuel. You cut out one, day's worth of calories, but then you don't have any issue coming back the next. I've had athletes literally hit 500 grams of carbohydrates the next day with no issue at all.

Cause an enzyme doesn't downregulate you don't have any issues. If you're trying to do a keto day or cycle in and out of a ketogenic diet. And I think just that flexibility of being able to go hard transition from, yeah, my fasting day is not necessarily my performance day, but it's only one day out of the week.

It was an off, it was a carbohydrate low carb day anyway. So I'll just cut out, calories that day. And most people could still train heavy, three, four days a week, and so for people who want that kind of in between, cuz a lot of people are like, I want to add muscle and get leaner.

It's if you really wanna get leaner, you need to do like physique athletes and just pick a time period and cut your calories. Or if you really wanna gain a lot of mass, have an odd season eat, 600 5700 grams of carbs, work your way up. But for some people. They want that kind of in between.

And that's just what I found is the best solution to, to live in both world.

**Dr Chester Soko:** I'd personally definitely want that in between. And I think that sort of that slower progress is better than, the dirty bulks, the dirty bulk physi, the physique athlete, trying to gain some muscle.

Cause I remember those, when I was in

**Dr Mike T Nelson:** college, Lee priest off season

**Dr Chester Soko:** Tuesday or Thursday, they had two pizzas at dominoes, large for 6 99 and I was hitting both of 'em up. And that just, that leads to yo-yo dieting. So I think the extremes at either end and regardless of your population, if you're brand new to doing this, or you've been doing it for forever the huge calorie intakes and then the huge crash diet cuts, I don't think those are optimal.

I think in implementing metabolic flexibility and manipulating your carbs throughout the day. Potentially throughout multiple days. If you're training and resting, I think that's the way to go regardless of your population and who you are. I think those the steady progress, that's your best bet as opposed to the yoyo diving.

**Dr Mike T Nelson:** Yeah, no I agree. And you also have the benefit of increasing health at the same time, right? Cause that's a whole separate podcast of people who just throw their health in the trash bin and don't worry about it. And I get at some level, if you're an elite of the elite, you're probably not gonna have the best health markers.

There's been, multiple case reports of, natural, not natural competitors, around the day of their contest and shit just gets wacky, but you're living in a temporary state. You're not gonna spend the rest of your life staying Stally neither. So yeah, I, I agree with that. Awesome.

I thank you so much for your time today. That's been super, super helpful. How can people find more about you.

**Dr Chester Soko:** Yeah, just go to my Instagram, Dr. Soko it's D R underscore S O K O. And I also have an app coming out hopefully in August. So just stay tuned for that. Dr. Soko on Instagram, I post a lot of non-biased research studies.

And my goal is essentially I am an athlete myself, and I want everyone to just feel what I feel, which is kind of confidence when you do look in the mirror, because I know just how frustrating and dejecting, it can be when you look in the mirror and you're not confident in your physique, or you're stuck on a plateau.

And my goal is for nobody to experience that feeling.

**Dr Mike T Nelson:** Awesome. And you obviously work with clients, they can, do you have any openings or are people yeah, still? Yeah. I have

**Dr Chester Soko:** A website link [bioscienceandsculpture.com](http://bioscienceandsculpture.com). Or you could just shoot me a message and we can discuss whatever type of coaching you want.

There's ability to sign up on the website, sign up for coaching on the website. Anyway, you can contact me. I'm always open. Instagram is the gateway to set up further

**Dr Mike T Nelson:** conversations. Awesome. Yeah, I would definitely took out your Instagram stuff. It's really good. I like your little cute dog picks in there too, which is great.

dog pick to chase the science. Yeah, that's right. Yeah. It's I put, I don't know how many memes in the flex diet shirt, just because you can only have so many graphs. I would do all the scientific graphs and then I force myself to take out a third of them and just put memes in their place and it worked much better.

Awesome. Thank really appreciate. Thanks

Question number one, in your biased opinion, what is the best chest exercise?

**Dr Chester Soko:** I'm old school with it, old school flat barbell bench, press

**Dr Mike T Nelson:** barbell. So you'd use a barbell or dumbbell or the interchangeable or any,

**Dr Chester Soko:** in my opinion, getting heavy dumbbells up onto your thighs and then potentially getting in that leading back position that can, my opinion could be a little bit more energy exhausting especially if you're using heavy dumbbells.

And I think that could be a great limiting factor of how heavy you lift and how hard you go. I know for a fact shoulder press, for example, getting those heavy dumbbells on your shoulders that seemingly is more energy demanding and injury risk than the actual press motion. And I think once you get to a certain load.

Your bench press. I think the dumbbells is just maybe the juice isn't worth the squeeze in terms of going super heavy. And I feel like you don't have that limitation. If you do a traditional flat

**Dr Mike T Nelson:** Barb bench press. Awesome. Do you have a rep cutoff for that? Like in my head, my rep cutoff is five to six reps, if I can do five clean reps with dumbbells and get 'em into position without any pain, I'm okay with it. But I'm definitely not gonna be doing triples or even fours or even fives are not something I do normally either. I don't know if you have a kinda a rep cutoff for people to decide barbells better for this versus dumbbell.

Yeah.

**Dr Chester Soko:** I would agree with the five measure. Sometimes lugging those heavy dumbbells, trying to get five reps up on either a shoulder press or a chest press is. Too injury, risky. Just because that weight does get so heavy relative to what you can handle. And I think that you could go heavier.

You could do more if you didn't have to expend so much energy, which is not necessarily growth promoting just to get those dumbbells in the position.

**Dr Mike T Nelson:** Yeah. And my other little real rule is if you're gonna use heavy dumbbells for dumbbell chest press or an exercise, you should at least have the grip strength to carry 'em to your bench.

Oh yeah. yeah. I saw some dude using straps the other day and I'm like thinking. This is not good. If you're using straps to carry the dumbbells and then do a bench press with them, like something's really outta whack. , the lazy

**Dr Chester Soko:** technique where they take 'em off the rack and they just soccer 'em, they kick 'em a little bit and they start open Northern bench.

Yeah. If you're gonna do that, you're already looking like you're gonna be in trouble.

**Dr Mike T Nelson:** Yeah. For someone who wants to increase the size of their calves, they've never had very big calves. They've trained them before, but they just don't want to respond. What would your advice be?

**Dr Chester Soko:** Majority of time. I see people.

Have poor exercise execution when it comes to doing the CALS. First of all, muscles grow best in their length and state. I think we have the stretch mediated hypertrophy research to, to back that up. So focus on getting your heel as low to the, as low to the ground as possible. First of all, never do a Capra on the ground.

Always do it from an elevated surface. We have the potential to drop your heel and then focus on your heel. Getting as low to the ground as possible. Getting a deep stretch control that stretch. You can easily implement pause reps while you're in that controlled position or slow down the tempo at the very end of the eccentric release.

So as your CAS get lower and lower, maybe slow the tempo down there, or do a pause rep when you have your lowest point. And then come up and contract and you can have a half a second contraction at the top when you're squeezing those calves to emphasize the mind muscle connection. But the majority of issues I see when people do Capra is they neglect the most important part of the rep, which is getting your heel very low to the ground and stretching those calves and controlling the weight while you're doing that.

I see so many people bounce and then you Cal raises drives me crazy, have a nice controlled tempo maximize that range of motion, drop your heel low when you're low being strict control that weight don't do something you can't handle. And then come up. And I also think some a technique that helps me with a mind muscle connection is when I do come up, I try to come up through my big toe.

I press through my big toe and I feel like that's really good at engaging the medial and lateral head of the gas truck. Also when you're establishing the foundation of your calves, just keep your feet in line. Don't try to manipulate your heels or point them outward point them inward just build that foundation.

And then once you have a healthy medial head and a healthy lateral head of the gas truck, then you can maybe manipulate toe position to address weaknesses. But in general, just keep that. Keep your form good toes pointed and straight in line. And take your time with your calf phrases.

**Dr Mike T Nelson:** Would you do more alternate standing for more calf development and seated for more soleus development or just flip 'em around or don't worry too much about that when you're starting.

**Dr Chester Soko:** Calves are something where you don't really have too much variation that you can do, relative to your other exercise. I can think of a million

different back exercises or checks exercises. You really are of limited when it comes to your calves. So calves, I do four things. I do standing Smith machine.

Those are two. So standing machine, Cal phrases, Smith machine Cal raises your seated CALS. And I do a horizontal it's kinda like a donkey Cal phrase. Where you have your torso is essentially bent. And I think you can interchange those four as you wish. I don't think one, I think probably your standing in your Smith machine are a little bit more effective to build more mass, especially your gas drop.

**Dr Mike T Nelson:** Yeah. This is the bigger muscle. Yeah.

**Dr Chester Soko:** But I think in general, incorporating those four exercises. That's gonna be your best bet to get the best looking all around muscles below the leg, the Solis, the gas truck, the whole meat and potatoes below the waist. Do those four

**Dr Mike T Nelson:** variants. Yeah. And would you go pretty heavy on 'em or do you have a rep range you prefer, or of all rep ranges?

**Dr Chester Soko:** I like operating in the five to about 16 rep range. I think if you go a little bit Lighter than that and do more reps that could potentially increase protein synthesis. And we do see a cutoff. If you do a set with over 25 repetitions, protein synthesis and growth can be reduced.

So definitely be able to reach true muscular failure. Definitely in my opinion, under 20 reps is a safe bet. Me personally, I like to stick on the five to 16 rep range. You might go a little bit higher on the low end. So you might go, maybe six reps is your lowest or seven reps is your lowest, your ankle strength and how well your ankles hold up.

That's gonna be key to how heavy you can go on Cal phrases, but in general, my best rep range recommendation would be varying it, but within the five to 16 rep range. And also, I like to use about two minutes to two maybe two to three minutes in terms of a interval when I hit Cal phrases. So this is a wrap range, that's gonna be relative to hitting a heavy, a healthy weight, sort, a wrap range. You're not gonna one RM, but it's a higher intensity close to your one. RM not necessarily a rep range five to 16 after 30 seconds of rest when you're super fatigued. So make sure you're getting ample rest.

That way you can push weight and reach failure in that five to 16 rep range. I don't really take Cavs to failure. I could sort keep one rep in reserve until the

last set but definitely heavier weight and heavy weight. Meaning you're rested, not necessarily heavy weight. Relative to how fatigued you are in your current state.

So longer intervals gonna be good for calves.

**Dr Mike T Nelson:** Cool. That's awesome. One thing I started doing with calf routine is you mentioned ankle strength is my buddy. Cal diets has some good isometrics and different foot and ankle positions. And that's made a huge difference because sometimes if you watch people who just start doing the exercise, you'll literally almost see their foot like deform at the bottom.

You'll see their arch, just you're like, oh my God, that looks horrible. And it would probably fix itself if they just didn't go so heavy and use better form and used correct technique. And then the time I actually tried to add size to my calves, which are very small, I thought, huh? Who has like the biggest calves that I've ever seen, genetic freaks. And then I've never seen a large mammal with small calves, right? Like you see a very, 2, 3, 400 pound person, whether it body comp, whatever. Most of the time they're gonna have pretty decent calves again, there's still variability in there. So I'm like, okay. So if I just do heavy farmer's walks and I did 'em in a barefoot shoe, would that help?

And I added like an inch to my calves in four months, but I was doing heavy farmer's walks like two to three days a week too. So yeah. And the fact that, I probably might have gotten just that much benefit if I just did more dedicated calf training. I just didn't do any other calf training just for the sake of an experiment.

So yeah. But I agree most people way too violent. And if you look at sprinters like sprinters in general, extremely violent movement, the calf has to be highly functional, but they usually elite sprinters have very small calves in general. So that's a hint that like maybe prioritizing speed and power is just not the best for that muscular develop.

**Dr Chester Soko:** Yeah. Yeah. Like I said, take your time on that eccentric release. Maybe implement pause reps. That's key. And then also, yeah, don't be afraid of those intervals. I see so many people just in general, like they don't am I opinion people should use timers. To, to go into intervals, don't be overly eager to go into cab.

I swear. People just, they want the burn they're training cabs with the burn word burn like, oh man. It's just like any other muscle, lift heavy lift with good form.

Take your time. Control the reps don't do anything overly fancy. It feels like when people have plateaus or frustration, that's when they're gonna start doing crazy stuff.

Instead of sticking with the basics. When in reality, they probably just had to change their technique a little bit and the basics will work just perfect.

**Dr Mike T Nelson:** Yeah. I would agree calves and I probably like the muscle I would put at the top of the list to go extremely slow and control. Like I use more.

Pauses at the bottom and top of calf stuff. And I do probably any other muscle group. And you look at the size of the Achilles. You look at the size of how much elastic energy can be held in that structure. It's freaking massive. So I think trying to go longer to dissipate some of that, to force the muscle, to do a little bit more work, just makes sense to me.

**Dr Chester Soko:** I would agree. And I'm probably looking, just thinking about all the muscles I train. I probably do slower tempo on calves than any other exercise or any other muscle group.

**Dr Mike T Nelson:** Yeah. Awesome. Last question, which we answered a little bit in the podcast. Any thoughts on exercise and nutrition?

If somebody wants to get significantly leaner, but add muscle at the same time, or should they not worry about that? And they should have more of a dedicated off season, their average body comp. So not looking to be a physique athlete, just looking to be better for the beach.

**Dr Chester Soko:** Yeah. I think another thing before I get to that a lot of people are not physique athletes.

I personally have never competed really body. Yeah. I've

**Dr Mike T Nelson:** never competed. Oh, that's surprising. I thought you would've. Yeah,

**Dr Chester Soko:** No. But I know what bodybuilders do and I know it's effective to improve the physique, high protein diet sleep nutrient timing. Use exercises that engage a lot of muscle compound exercise.

So even if you're not a physique athlete, or even if you're not a body builder, me and myself, I've never competed, but I'm gonna live a lifestyle similar to a physique athlete, similar to a body builder because that's just what works. Yeah. In terms of optimizing body composition so if somebody wants to optimize body composition and look good for the beach, they're gonna have to live a lifestyle similar to a body builder, which is equally space protein throughout the day.

Pre-workout protein, post-workout protein. I think that it can be highly advantageous to use metabolic flexibility. So you don't have to accumulate a whole bunch of body fat to gain muscle. I think you have your pre-workout carbs. If you're an elite athlete or you're looking to get the most highest performance in the gym, maybe some intro workout carbs in that first six hours.

In my opinion, especially four hours, don't be afraid of carbohydrates like eat those. Those are fine. Those are great. Those are gonna be the fuel to grow. So it's not. Having your protein but giving your body energy to link together those amino acids to build when you're highly sensitive to build.

And again, that first six hours post workout, you are incredibly sensitive to build more so than any other time. So I think you should definitely take advantage of that, use that metabolic flexibility. So increase your carbs gradually post workout have that sort of, maybe we can call it a carb back load and then you can decrease your carbs, lean proteins throughout the day.

Vegetables are gonna be great. They're gonna be great for that volume, that sat. So you're not getting MUEs and having, maybe sneak a cookie or something or cheat on your diet. Those are gonna be good, but manipulating your carbohydrate timing with the majority around your workout, especially some post workout, that's gonna be your best bet to get in that

**Dr Mike T Nelson:** beach body side question.

I just thought of, if someone wanted to maximize more the muscle gain side of the equation, any thoughts about. A caloric surplus would look like, cause we all know that if we wanna absolutely maximize it, you probably need to be in a caloric surplus. But then the question is how much right? We've seen the old, dirty bulk, even with, drugs, everything else.

At some point, those people just started getting fatter, right? they weren't even adding more body mass. So do you have any thoughts on if I'm gonna be in a

caloric surplus? I want to try to maximize that process, but I don't wanna add so much fat that it's gonna be really hard to take off later.

**Dr Chester Soko:** I would say first of all I didn't make a custom formula on my website that dictates essentially you log how much work you do in terms of minutes per day.

And then give some traits about your body, height, weight level of training, intensity, history of training, and it can spit you out. What I is estimated to be an energy balance or caloric surplus And I formulated it myself, got nerdy with it. Oh, sweet. It looked at a whole bunch of RMR data as well to get it as accurate as possible.

My clients use it. I use it. It's pretty spot on. But in terms of chloric in general, I don't know. I think it depends on the size of the individual. So maybe like you can't just say like, all right, 500 calories extra, cause 500 calories for me at 255 pounds is whatever, 500 calories for someone, a girl who's 115 pounds.

That's not whatever, like 500 calories, a lot of extra calories. So I think you might have to do it in terms of percentages, based on how much you're eating. Plus 5% or plus 10% of how many calories you're eating. So if you're having, 4,000 calories and you wanna do plus 10%, a calorie surplus might be 4,400 calories.

But what's also equally as important is not just that number. Cause remember growth is not linear. It's not the same throughout the day. You're highly sensitive to grow post. So if you're gonna have a calorie surplus, having the majority of it post workout, I think that might be the best time. That first six hours that's when, okay.

Maybe I'm not gonna be in a plus 10%. Maybe at that time I wanna be in a plus 30%. You don't have to get super scientific with the numbers. Just don't be afraid to eat post workout. The extra bagel, if you're gonna have it, have a post workout, Make sure you're getting adequate nutrients when you're most sensitive to grow.

And I think that's gonna be extremely critical. So if you have, plus 5% plus 10% and whatever, you're comfortable tolerating in terms of, if you're in a LIC surplus, you're gonna add some fats, whatever you're comfortable tolerating in terms of adding that fat. Sometimes it is plus 5%. You don't wanna add too much fat ticket.

Plus 5% are relative to your energy balance. But make sure in those sensitive windows, you're getting ample calories and you can pull back calories later. How you eat two hours and four hours after your workout is not gonna be the same as how you eat 14 hours after your workout. So make sure it's not just your general calorie surplus, but getting those nutrients at the right time.

**Dr Mike T Nelson:** No, I love that. And one thing I use is looking at the ratio of, am I getting stronger back to the performance we talked about and is my body weight going up in proportion? So if I'm getting stronger and body weight's slowly creeping up, I'm like, eh, my ratio's probably pretty acceptable. I did a strong man event in 2014.

I was doing my PhD. So comp wasn't the best I figured. Ah, fuck it. I'm just gonna eat as much as I can because nutrition was not like didn't have a ton of time dedicated toward it per se. And I got up to 2 47, but like from 2 35 to. 2 47 and definitely two 40 to 2 47. I, my performance didn't really go up any faster.

I just got fat yeah, I agree. There was definitely, and so I hit the top of the threshold, but I kept going, cause I didn't know where it was, so yeah.

**Dr Chester Soko:** yeah, there's definitely a point where you're dirty bulking and you're not gaining muscle any faster. Yeah. I've weighed almost 280 pounds. And I don't think I was gaining muscle faster at 2 55 versus 2 78, I think at some point, what do you need to grow?

You need a amino acids and available energy. If you already have, a pretty decent diet and you have ample body fat. You got available energy, you got plenty of energy that you can potentially spare to fuel that muscle growth, and you don't need any more energy. So if we look at, in general if we're gonna talk about a calorie surplus plus 5% plus 10%, I do think the person's body fat also makes a difference.

If you have a little bit more body fat, you could shy on the closer to plus 5% or closer to plus 10% relative to your energy balance. But if you're super lean, you don't mind gaining a little extra fat. Maybe you can be more aggressive plus 10% plus 15% plus 20%. So finding the perfect calorie surplus, there's no crazy science.

It's a whole bunch of trial and error in terms of how much potential body fat are you comfortable accumulating? What's your performance doing? If your performance is constantly increasing. You're good. Don't worry about adding

extra calorie. Don't get greedy with it. I feel like I did that in my younger days, cause I started perform really well.

Alright. I can have a little more. And I don't think you have the same return on your investment return on performance gain or muscle gain for that Cal caloric investment. So be content with, steady strength gains. I feel like steady strength, gains performance tracking. Once again, that's gonna be indicative of, Hey, what you're doing.

It is pretty much working.

**Dr Mike T Nelson:** Yeah. And that's why it's so hard too. Cuz last point is the variability, right? You've seen Levine study where they overfed people by a thousand calories. Some people just moved most of the energy off. Some people became a clog and gained like 12 pounds, so they were all in a caloric surplus, but they didn't control exercise or movement.

So you've got your thrifty, non thrifty, there's all these different hypothesis, but we've seen that the rate is just different from one person to the next. And at the end of the day, even with a coach, like it's just gonna be at a controlled experiment to find where your limits are as an individual and then you can adjust from there.

**Dr Chester Soko:** Yep. And the last point, just be. Really good about communicating that to your coach and taking notes? Yes. You're constantly, if you're trying to change your body, you're constantly doing a case study. You're constantly doing a research experience. It doesn't matter if you're a year or if you're a week into it a year into it, or 10 years into it, you're constantly doing an experiment learning about your body.

So tracking data, recording how you're feeling, taking progress, photos very important at all stages.

**Dr Mike T Nelson:** Yeah. Awesome. Thank you so much for all your great time today. I really appreciate it. And I'll let you know once this one is out the podcast. I think we'll try to get this one out possibly for Monday or Tuesday and yeah.

Keep in touch. Thank you so much. I really appreciate it. Nice doctor. Nice for having me. How good. Thanks doc. See ya. Bye.