DANNY LENNON: Mike welcome back to the podcast. How are you doing?

MIKE ISRAETEL: Good Danny. I am doing great. Thanks so much for having me back.

DANNY LENNON: No, it's great to have you and just before we get into some of the topics I was hoping to hear your thoughts on. Maybe give us a rundown of what's being going on lately with you and the work you're doing. What you've been working on recently? Anything that you can share right now that is worth of note of what work that you and RP have got going on?

MIKE ISRAETEL: As you know, I've been taking a lot of pictures of my own face with different emotions, because I am really trying to find my own soul and it's been difficult but a necessary journey.

DANNY LENNON: That sounds like a great picture book?

MIKE ISRAETEL: Yes, of ugly faces. All ugly.

DANNY LENNON: I would like to see how many sales of those if you actually put up that'll be great.

MIKE ISRAETEL: God. My God. Don't want to poison the Internet with that kind of stuff. Luckily I've had slightly better things to do. I am working on a couple of really, really good things right now, so I have just finished the rough draft of the Volume Concepts book and that's the maximum recoverable volume, minimum effective volume all that stuff. Dr. Hoffmann and I are really flushing it out explaining the living shit of it. It's going to be several hundred pages long, and actually just finished getting the drafts for that digitized and they look really, really awesome, so I'm super pumped about that, and that's going to be in editing for a little while, and then it's hopefully going to hit the streets so to speak in a couple of months.

Dr. Hoffmann and I again are almost finished with the Recovery book. It's going to be massive; everything about recovery both theoretical and applied recommendations all the stuff.

I have actually just started re-writing the Renaissance Diet, so that's kind of trip because I guess that book is 3 years old now which is really great, right, like time flies or whatever. So, I guess it just kind of snuck up and Nick was like, "Hey, you know we should probably re-write the Renaissance Diet," and I'm like, "Oh, holy shit you're right," because at this point the book is mostly theoretically correct. The current Renaissance Diet book is good, but there is some stuff in there; more so than making any real big mistakes, which I don't think we made a whole lot of. We certainly flipped here and there, but I think the book, you know, it doesn't talk about some stuff that we now talk about all the time, and we have no book to refer to, for example anti-hunger strategies which you saw me present at a conference, what's it called? Netherlands, right? That's going to be in a book, stuff like that. So, we are beefing that up hopefully for a November release. I'm recording a lot of videos for our pay sites; RP Plus it's called, just 20 bucks a month US and it's so many videos you can't shake a stick at, full hour long content videos about actually exercise physiology courses, biomechanics courses, sports science all the stuff. We're actually trying to put together what we're going to call eventually RP University where it's going to be an entire

undergraduate curriculum worth of video courses online for 20 bucks a month, so that's super exciting. It's a shit load of work, but you know I have no actual friends, so the work keeps me occupied.

DANNY LENNON: Yeah, there seems to be no end to your productivity, so that's really exciting stuff going on. Actually, it probably leads into some of the things I was going to ask about. Probably later on I'll touch at least one or two questions around the volume landmarks. Just because I don't think you are that sick of talking about them yet. So, I'll add to that, but it's interesting that you talk about this process of updating the book. I wasn't aware of that, and just as you say it, is there anything – I know you said there is a couple of new things that you might add in and maybe you're updating it, but as you're going back through some of the older parts of the book is there anything that stood out to you as something you may be changed your view on; maybe not so much in a definite sense, but in terms of how you practically realize. Is there anything that first jumped out that was, okay I would do that differently or at least I would put the message across differently to people?

MIKE ISRAETEL: Yeah, absolutely. I can give you two good examples. One is on the rates of weight gain. We used to recommend 1 to 2 pounds a week; that's probably a bit on the high end and we've tapered the recommendations down to a quarter-of-a-percent to half-a-percent per week, body weight. So, that's for most people more like half of their former rate, so half-a-pound to a pound of weight gain per week. I think the earlier recommendations were effective, but it came with a little bit of additional body fat that's probably pointless in the grand scheme of things certainly not a great use of time; not the best use of time.

The second example is we were very particular about nutrient timing at the expense of other variables, such as hunger. So, for example, we recommended pretty vast quantities of intra-workout and post-workout shakes, which from a pure performance standpoint are actually optimal. The problem is, is that if you squash so much of your diet carbohydrate into liquid meals during your workout.

Actually what you're doing is during the workout as when you are least hungry; usually right after the workout is when you are least hungry, and you're taking in the most concentrated form of carbohydrates when you're least hungry in a liquid form which is the least filling. So, you're really screwing over your hunger completely, because a couple of hours later in that scenario you've drank all your carbohydrates during the workout and right after you're going to get super hungry. It's going to be evening, and you are going to want to cheat like crazy and you're going to have damn your no food leftover because you're pissed away so to speak all of your carbs on the shakes. The tradeoff between the realistic application and hunger variables versus exactitudes of timing and nutrient digestion didn't escape us the first time, but we certainly didn't put enough of emphasis on them. Since, then we've worked with so many more actual people we found that giving people more whole food, slightly smaller shakes works out better on the net balance by a long factor. So, we're going to be renorming those recommendations in the book.

DANNY LENNON: Yeah, sure. That was actually the question I had coming in my mind as you talked through some of that stuff; was it based on either feedback you're getting from the book and coaching clients you have with RP that were talking through some of these issues, because, like you say, it's necessarily that any of those recommendations were wrong, right? If you look at sports nutrition literature like absolutely that's going to be the best thing for your performance is high amounts of these carbohydrates intra-workout or at least in that workout window. But again if you are looking at high-end sports performance you may be working with an athlete who has completely different overall requirements; number 1) In terms of how much energy they require compared to someone that's just trying to diet for body composition is doing strength training, and like you say, number 2) Just what they're actually going to stick to is probably different in the long run. So, that's interesting that it's been something that's just been tailored based on what you've been finding with your clients, I'm assuming?

MIKE ISRAETEL: With totally clients, with ourselves; all of us train as well who work at Renaissance and we're kind of like playing around with these hunger strategies and all, man these are really good and all that liquid meal stuff is really blah. We're kind of in Renaissance style we're really set out to do is a – we're curious how tip-top athletes should do things optimally, and everyone else can kind of adjust to your own needs, but understand that you're making tradeoffs.

Our book is primarily purchased by people who are very dedicated to their training, but aren't fully elite athletes who are career professionals in sport. So, we're going to say is this time we're going to aim for those people and say, "This is a really good reasonable recommendation. Now, if you are super elite athlete you got to consider some tradeoffs in this direction. If you really just want the basics you can damn you forget about all timing altogether and here is that direction." So, we're less trying to push one way or the other which is going to be more flexible and give people a couple of different choices sort of like lanes in a highway to follow. We're going to talk about the middle lanes a lot, but we're going to say like you want the fast lane here it is here are the tradeoffs you have to make. If you want a really slow lane here are the tradeoffs you have to make as well.

DANNY LENNON: Sure, and it's interesting that you picked out that as one of the examples, because one of the topics I did want to talk to you about is around, not nutrient timing, more so carbohydrates for people who are doing strength training, and this is particularly coming from the aspect if we're looking at competitive strength athletes, so power lifter or a weightlifter and the role of carbohydrates because this is something that – definitely in some discussions I've had there are people with very different degrees of – or their viewpoints changed to varying degrees. On one hand we know that carbohydrates and performance are kind of synonymous within sports nutrition that's sure, but on the other hand we obviously know that some – people always recommend, oh you don't use glycogen during a heavy single, so for a power lifter they don't need carbs, right? And then, I suppose the first obvious thing there is that very little training is actually going to be one heavy single or a nine

heavy singles like a meet. So, it's not feeling for meet we're doing, and then secondly even if we don't do very glycolytic work maybe the way some other sports are there is maybe some benefits to carbohydrates beyond glycogen store or glycogen replenishment I should probably say. So, for strength athletes listening, particularly power lifters and weightlifters how should they think of the role of carbohydrate given that people are making the argument that – when you look at these you're not really putting all that much for glycolytic demand and not really burning through a ton of glycogen in these training sessions, so how should they think about where to even go with how important carbohydrates might be for that performance?

MIKE ISRAETEL: Yeah, sure. So, man there is a lot to say. One thing I had to say to them right off and it's right to some extent. You don't need 600 grams of carbohydrate a day for a weightlifter or a power lifter; you don't need endurance level carbohydrate. I remember reading some recommendations, and I'm sure Danny you're familiar with this kind of maybe sloppy thinking or maybe even thinking just sloppy recommendations that a lot of the older sports nutrition texts they would source studies on endurance athletes. When they make recommendations they would say athletes require a whole lot of – who the fuck are those studies on; cyclists in a lab who are cycling for 6 hours at a time, yes, any weightlifters they are like no, but you know athletes here are the recommendations. And there were thinking like you know during the average weightlifting workout you need like 200 grams of carbohydrate per hour I'm like what you're kidding me you're going to drown yourself in glucose that's insane. So, definitely they can get away with less absolutely, but there is a certain amount of less that is too little, and it doesn't just have to do with direct energy utilization. There are a couple of things that are concerning here. One is that stored loaded glycogen; the degree to which the glycogen is loaded actually has an anabolic downstream signaling effects. Loaded glycogen signals the rest of your muscle to okay undergo anabolism creation of new muscle tissue. If you are depleted in glycogen that actually doesn't stimulate muscle protein synthesis it negatively affects muscle protein

synthesis, which is one of those that almost ubiquitously, so bodybuilders will say cutting – maybe not 50/50 but some bodybuilders do ketogenic very low carb diets to lose fat, but almost no bodybuilders will ever tell you that you can gain muscle in appreciable quantities or optimally with no carbohydrate, right? Even the most strict keto adherents are usually like, well no in the off season I eat carbs, but come diet I go keto, it's like okay. One of those reasons is that carbs are big player in literally engaging the process of muscle growth, because of the glycogen storage and the detection of glycogen storage as a means of modulating hypertrophy. In addition to that carbohydrates secrete insulin more than the other nutrients do, unless you just drink purely protein for all your protein in which case your life sucks and you should probably reconsider leaving out altogether. So, carbohydrates are stimulative of insulin secretion. Insulin is wildly anabolic and it wildly promotes recovery in every measurable sense, and if you have more carbohydrates you have more insulin, yes you need fats, but extra fats more than what you need as a minimum doesn't really help you much in any kind of metabolic way. Extra carbohydrates do secrete more insulin which is probably a good thing, which is probably where you see a rise of this idea of "Clean eating," in bodybuilders. Bodybuilders will try to gain eating 800 grams of carbs and only 80 grams of fat, and you say jeez why don't you just have more fat it'll be easier because carbohydrates gram-for-gram are probably more stimulative over the course of the day of hypertrophy. Here is an another one, carbohydrates when they lead to higher blood glucose levels the nervous system runs primarily on blood glucose; it's spoiled and rotten, and guess what has a lot to do with whether or not you make or miss a lift, especially an explosive single the nervous system a ton. You want your nervous system to be fired in all cylinders which is why higher level of blood glucose with a good carbohydrate intake is a basis of that is a good idea. If this can be really simply refuted by doing a very low carb day and coming in and trying to do lifting, it sucks. We all know it sucks. There is a reason it sucks, because your nervous system is like, what the hell is going on give me food or I won't do shit, and your 90% snatch feel like 100%. So, that's

another good reason why carbohydrates are a good idea for those athletes who consume, because we're not just feeding their muscles we're feeding the nervous system as well. There are still other reasons if we had doubled the time I could get into more of them, but there's kind of like a multifaceted approach towards carbohydrates potentially a variety of all the processes. Clearly we can just – you've already refuted this myth yourself that singles are the only thing you do in training I mean you rarely ever do singles, right? To put it this way, the setup for a lift even taxes you, so what do I mean by that? Let's say that you're down to very low glycogen levels in your muscles, not good. When you setup for a snatch guys don't usually just dropdown rip it up and go, they set up, they arch their backs, they re-arch their back, they re-arch their back, they push their chest up, they wiggle their knees a bit, and they sit and then go. That entire time your glutes are active to some extent. What is it that they're burning? Now, you may be pulling the bar pretty harder, right, to get into that position that might be burning glycogen. That can take away if you run out of glycogen or almost during that time you could start to rely on other fuel sources during your setup, which would be immediately available ATP in the cell and creating phosphate reserves. Now, you're taking away from that total amount of energy you could have put to that one rep you're taking away and distributing that energy into the setup. Usually in the setup you use glycogen stores, but you can't do that anymore because you're run out of them shit, right? So, if you are well fed with carbohydrate your setup goes great. If you have to grind the rapid goes great, even for singles. Now, everything you pass two or three reps using considerable amount of glycogen to fuel, and then the argument is a direct one where you might as well be using that. Yeah, you don't use a ton of it, but – here of shit, while I'm on the matter here is another thing where do you burn, especially in your legs, what kinds of activities do you burn carbohydrates? Well, with everything; standing, sitting back down, walking, and pressing the gas pedals in your car. Don't you want your glycogen to be pretty maxed out of your legs when you go in for a big heavy session at 6pm at night for squatting or for snatching or clean and jerking or whatever versus you're

trying to stand a very low-end of carbs and you end up just – you had to walk to the post office and you had to walk back and you weren't anticipating that; you might have burned up some number of percentage points of your internal glycogen in your legs that's going to cost you just a little bit in your workout, and because it's so easy to eat enough carbohydrates to cover those needs because like I said, weightlifters don't need as much as marathon runners. The difference is you eat 200 grams of carbs today versus 150 and 150 is just enough to meet the needs on a perfect day, but it's borderline. If you have to be more active blah, blah, blah whatever, whatever and sometimes it costs you a little bit of workout effectiveness. Why not just eat 200 and make sure that shit never comes up. I would be for that latter argument.

DANNY LENNON: Yeah, sure. So, I think there are a couple of takeaways there. There is obviously on one end we know that like in those certain circumstances you outlined that the glycogen availability alone is going to directly be used, at least in certain circumstances, and then even if the people make the point, okay you're not going to use it a whole pile, and at least from what I've seen even within intense weight training sessions maybe like 20% to 40% will be a huge depletion to see with that type of training. At least I haven't seen a more, unless it's a specific depletion type workout, right? But for most training sessions it's not going to be like you're completely depleting your glycogen, but we're saying even within that if you're consistently doing that and you're going in without fully repleted glycogen stores, I think the signaling aspect is really interesting, because it's one that – like you outlined, it gets left behind a lot. People look at direct fuel utilization and we know even like the glycogen stores will be a signal itself. Within endurance research we're kind of starting to see this emerging area of carbohydrate mouth rinsing, right, where even the signaling going on there. So, I think it's an important aspect for people to consider number 1) On either glycogen stores, but then those signaling affects, and even if were to take it as something like singles I'm sure anecdotally people will know that in a perfect environment if they were to walk in and they

were going to go test when they maxed it in the gym would they prefer to go in after doing like 2 weeks of a zero carb diet and having little of a glycogen versus just that like whether they want a placebo or not just that full feeling in their muscle from being fully repleted I think it makes a difference how someone is going to feel and perform, right?

MIKE ISRAETEL: It makes a difference to the other factors; and you're absolutely correct about all those, the other big factor is the nervous system fuel like your nervous system – is there an argument that sort of the nervous system can start to run pretty well, not optimally but pretty well on ketones, yeah but that transition takes a while, especially if you are still eating some carbohydrates you never really make that transition, and if you just go on a lower end of that carbohydrate versus just try to eliminate them completely then if you're on that low-end when you come into the gym and your blood glucose is not as high as it should be you will pay the price, because your body is not going to make ketones, it's not going to utilize them for the nervous system, and you don't have enough glucose around. It's a bad deal. It's basically like you know what kind of meal would you want to have before the – your aliens come down to earth, right, unless you got 2 or 3 days or like you got 2 hours, right, and maybe 3 hours and we're going to setup a platform in Washington D. C. and if you could make a snatch of whatever number of kilos that's you Danny Lennon, and then the world would say if you can't make the snatch, you know, you've got three attempts then we're fucking milking everything, no more earth, and someone is like hey – so you got to eat meal, right, 3 hours you're like do you want carbohydrate in the meal, no, no it doesn't matter, like really who would say that, you know what I mean, like yeah I'll take some carbohydrate I wanted to feel good, I want to feel energetic, and that's a reflection of the physiological reality that the nervous system feeds primarily on blood glucose. So, do you want to feel good for workouts and will that translate into better use of your nervous system, to be more explosive, etc, and have less fatigue during the workout itself, yeah. Here is another thing, how much blood glucose you have has to do additionally with how much you fatigue

through the workout. So, for example, workout is not a single. It may be 10 singles, right? So, by single number 9 or single number 8 or single number 10 even how are you going to feel if you're not fed-state with carbohydrates versus if you're low on carbs. There is going to be a difference there. You maybe a little low carb on first single, just fine, but the last one or the second half of the workout it might not be going as well for you. Now, these are all marginal benefits. They are not enormous. In endurance athletics, specifically in marathon and 5,000 and 10,000 meter there really is no debate about low carb diets. If you come to a running club with 10,000 meter runners, you know, you've been associated with like official programs before like national level sports performance programs, like if you say I eat low carb they're just going to laugh at you and be like, okay so what's the punch line, you'll, no I'm serious, and they're like, no you're fucking insane. So, the endurance athletes there is no more debate, there hasn't been a debate since the '70s, but in strength sports there is still a debate, because people can get away with fewer carbs and not notice that they're being hurt just a little bit. So, what I say is, look you don't have to go overboard on carbs and go nuts, but if you have more carbs and a little bit less fats to make sure you meet those totals, and in the Renaissance Diet book for example, we have numbers to hit to make sure you meet those needs then you don't have to worry about a thing, and you'll guarantee a high level of performance at least in that pathway.

DANNY LENNON: Awesome, and as much as I appreciate that analogy if the world is relying on me to hit 130 kilos snatch I think we're safely fucked. I'm sorry man. It's not just in the realms of possibility for me I think. Yeah, it was a good run. Just while we're on that – and this maybe a turn just for a more speculative, and so that's more on the applied side, obviously then we're saying that for the majority of time given that it's a choice for someone to be able to hit these; like it's not going to be a big deal to get sufficient carbohydrates I think for most strength athletes. Where some may run into issues then if we're saying it's going to even impact a one repetition max; for those athletes who are maybe cutting down into a

weight class say for a power lifting meet where there may be an IPF for say 2 hour weigh-ins, and one of their strategies typically is to go lower carb that lasts like 10 – 7 days or so just to get rid of some of the water and glycogen to bring bodyweight down to make it. Obviously, they have a small amount of time before they go in again to the meet, but certainly not enough time probably to completely restore glycogen. Just having some carbohydrate after that weigh-in do you think that should be sufficient for them to still be able to maintain best performance or is it likely that, even though they are getting some carbohydrate, even though their stores are not going to be maximized is that still going to be enough for them to be able to perform in the platform. And again, I know that there are lots of other variables that we could talk about and it's quite speculative, but is there any way to start piecing this apart?

MIKE ISRAETEL: Yeah, I mean, I think that you can guarantee a pretty good performance. I wouldn't be in the business of guaranteeing optimal performance, and I think you don't perform in any measurable way close to what you perform like when you are isocaloric, well fed, juiced to the gills with food, you're going to do great. If you are restricting in any way and the repletion protocol is not complete in any substrate including glycogen you're not going to feel 100%, but it's not the major factor because the major factor is blood glucose at the time of your event. So, after you weigh-in should you be smashing couple of hundred grams of high glycemic carbohydrate, yeah. Should you be consuming carbohydrate shake kind of Gatorade or something in the warm-up room, yes, and during the meet, yes, to keep you nice and saturated with the glucose so you have tons of energy at the moment? Is that going to make the most out of an already sub-optimal situation? Yes. Remember that everyone in your competition class maybe in a very similar sub-optimal situation, and the person that might have dieted of fat instead of dropped carbohydrate may had to do a harder diet and may have lost a little bit more muscle or may have been more fatigued. So, it's by no means clear that in those small margins which one is better. Now, I'm usually for losing the fat months beforehand, but if you're already very lean I'm

not sure that's really the answer anymore, you know what I mean? If you are 16% fat and you've got a weightlifting meet in 3 months take the next 2 months to dropdown to 10% or something or 12%, and then you won't have to cut for your meet and you'll be gold and it won't affect you negatively almost at all. But if you're already 8% or 9% fat I don't know how much you're going to be dropping without a negative effect, so in that case you may actually just opt for that approach you described drop body water through glycogen manipulation, and then bet back probably most of your performance through a bolus of food and water right after weighing-in. I can't say it's going to be all of it. I would be lying in that case.

DANNY LENNON: Sure. Just while we're talking about the idea of dieting towards the meet or even if you take the case of someone that's number of months out from a meet; in that case it reminds me of a conversation recently I had with Bryce Lewis when we were hanging out here late last month, and we gone on to talking about different strategies for weight class athletes, and if we're talking about specifically for a power lifting case one of the ones we're talking about is if we consider someone who is well away from a meet, now they were a number of months out, and they've got to obviously get down their bodyweight to a particular weight class and they do have body fat to lose like the case you've outlined where they can gradually bring that body fat down. There's kind of one or two ways of think that I see people traditionally have. On one hand, they may say, okay I'm going to keep my calories at maintenance right now. I'm going to keep that higher level of bodyweight and to be able to use that extra food and a higher bodyweight to get a good training effect for as long as I can, and then in the weeks leading up to the meet then I'm going to start dieting down as the meet comes around versus on the other hand you have people who'll say, let's get that body fat down right now. Get to a lower bodyweight right now with a calorie deficit, and then we can maintain for those kind of number of weeks leading into the meet at that weight. Do you have any strong view on which one would be optimal for people who know

they're going to be dieting at some stage, but kind of have these two views presented in their mind?

MIKE ISRAETEL: Yes, absolutely. I think that dieting should almost always for competitive power lifters and weightlifters occur in the second explanation – the latter approach, and I'll give you a couple of reasons as to why. To be clear it is my opinion that dieting early and stabilizing weight early and then coasting in at a relatively maintained weight just 1% or 2% above your competition weight is a good idea. Here are a couple of reasons why; the first when you subject the body to a hypocaloric condition, not enough calories, you must make sure that the anabolic stimuli coming in from training are relatively high to counterbalance the catabolic stimuli or the hypocaloric condition. So, not enough food tells your body lose muscle, lose muscle, lose muscle you've got to present it with some decent training volume so that it says build muscle, build muscle, build muscle and those two cancel out. You don't lose any muscle. So, months ahead of your meet you'll be doing sets of 5, sets of 8, maybe even triples anywhere in that spectrum, and if that's enough volume and you'll be doing enough sets to actually make sure that you don't lose muscle while you're losing fat. On the other hand, let's talk about the situation in the several weeks leading up to the meet. If you're hypocaloric then the hypocaloric diet says lose muscle, lose muscle, lose muscle your physiology kind of looks around and okay trainings what do you say? Training is like all I got is singles and double, like okay that's not really lot of volume in trainer says, look that the carbs had been dealt, sorry, no need to try to keep muscle because apparently we're not using it. So, you're going to lose a lot more muscle, so that's point number 1. Point number 2 is – I can think three big points that I can think of off the top of the head at least. Point number 2 is when you're trying to hit your biggest numbers or rather as a question; when are you trying to hit the biggest numbers, and the answer is in the weeks leading up to the meet. That's when it's important to be your strongest, right? If you're a weightlifter or a power lifter when would you after the meet – when would you want to have recounted to somebody that you're training was kind of shitty, 2 months before the meet or a month before the

meet. If you're right now the oracle of time, and wisdom, and eternity and faking down and I was like, listen you're going to have a meet prep cycle, you're going to tell me when it's going to be shitty. You get to pick 2 to 3 months out or 1 month to 2 weeks out? It's got to be shitty one of those times you pick when. What are you going to say? Of course, 2 to 3 months out, right? Because you can fix some shit, you can reevaluate. If the training is not great at least if you put in the volume and it's decently heavy you're good to go. What are you doing in the several weeks before the meet? You're going really to your limits. Your heaviest weights, your highest percentage of efforts, your technique has to be super sharp. If you're hypocaloric during those times, your technique isn't sharp, your energy levels are down that's the part of the training you don't want to fuck up, you know what I mean? It's kind of like a if you're a racecar driver – manager and you got a couple of racecar drivers come to you and one of them is like, hey listen I need some time I'm going to out and party, and just bang hookers, do tons of drugs when should I do it you know there's a Grand Prix season coming up in a month. You'd be like do it now damn it, so you could be okay to race and clean your ass up. You don't want to be like, cool just do it whenever a week before is fine, right? There is a timing situation for that, so you definitely want to feel your best leading up to the meet. You want to be in a maintenance mode by then, you want to be isocaloric and not hypocaloric. And the last consideration is a very interesting technical one it's about leverages. If you lose even a small amount of weight, several percentage points, especially in sports like weightlifting but power lifting as well, especially in something like the bench press and the dead lift your leverages, your alignment changes, and your technique has to change too. You want to give your body time to adjust to that new weight. You don't want the adjustment to be new when you're stepping on the platform. So, for example if you're a 94 kilo weightlifter and you usually sit around 100 kilos if you dive down to 94 and just do a competition right at the end of your diet you're going to feel a little funny at the bottom of the clean and jerk and the bottom of the snatch. The bar is going to sit a little differently on your clavicles before you jerk it, right? It's

going to feel strange things, you're going to be off, and we all know in the weightlifting if something is off by a little bit you'll miss a lift, right? So, the body that you have at 94 is a physically different body the hip crease falls on a slightly different place, because of the different dimensions of body fat and muscle your squat stance might be a little bit wider or narrower that changes everything up and down the chain, right? So, it's a good idea to dropdown maybe 2 months before. Stick around 94 kilos. Get used to that body, ah this is how I have to change my catch position for the snatch, this is where I put my feet now, and then by the time the meet comes around you've already been well practiced in that new machine. So, those kind of that tri-factor of combinations where – from there we kind of realize, okay maybe that whole characteristic thing of dieting right into a meet is a bad idea. I honestly think where that comes from is the same shit you know like Rocky movies, kind of like the montage and crescendos, and the next scene is him on the fucking ring getting his face beat to death. It's that kind of thing like well you know I'm just going to like peak and I'll be ready and it'll be great and right when dieting I'm going to win, and then I'm going to eat a bunch of food with my friends it'll be great. Look it makes for a cool Nordic folklore, but the reality of modern periodization is that sometimes you have to do things in a segmental fashion well before – you're basically putting into place phases that mature much after they're put into place. It's not sexy version of doing things. Somebody could ask you, hey how is your bodyweight? That's 2 months before the meet. You're like, I'm actually right on track and they are like, I thought you're supposed to diet into the meet. You're like, no I got ready early so I can get used to my new body. That doesn't cool, you know, it sounds much cooler when you're like 3 weeks out, how much you have to lose, you're like, 3 more kilos, and they're like, go get them tiger you man, so there you have it.

DANNY LENNON: Yeah, I get that. I can see that for sure like 5 or 6 weeks to go and it's like, okay now it's time to start kicking into gear, yeah, yeah time to grind, absolutely.

MIKE ISRAETEL: There are different gears. You have to be in some gear all the time, you know what I mean? It goes back to the sort of

mythology outdated thinking of the off season, you know like, you know I've been around sport long enough to understand that there is no off season, there is no such thing, there is a preparatory phase, a general preparatory phase, there's specific prep, there's different phases where you work at different things, but the idea that you kind of do much of certain times, and then have shit you know it gets closer, and closer to the competition that you kind of linearly intensify every element of your preparation is just outdate, which is false you know. That's just not how things work. In a true phasic design of training you attempt different things at different times, and yes there is even a time for psychological relaxation, but that time isn't the entire off season. It's maybe a month after your biggest meet, and then you get back in the gear and start to work on things that mature eventually and you have to sequence it properly.

DANNY LENNON: Yeah, I think that parallel with training is actually really useful for people, because everyone is clear of kind of like a smart training philosophy, you have a periodization over time, and there are kind of different goals for each phase that will eventually lead to something, but then it's not like you don't come 4 weeks out and say, okay now it's time to really start working hard. It's like you know you should have being doing something all along in a structured manner and preplanned kind of similarly we're going to say, well why don't you do that with your diet as well?

MIKE ISRAETEL: A hundred-percent. A quick example of a story of that and another quick analogy. It's almost like – you know every now and again like – people are just trying to start conversations and be nice, which I do appreciate I'm super nice back, but people ask me when I'm super pumped in a gym or something like that, every now and again folks ask me, oh you've got a competition coming up? And almost always the answer is, no, because you know in bodybuilding the competitions are few and far between. So, you know you've got one coming up in 16 weeks or a year-and-a-half you're not going be like, yeah. So, I'm like, no I'm just trying to get bigger, and you get to see a confused look on their face. They are like, why the fuck is this guy so jacked up and so lean when he is not even competing for like – they think like

– and not even that, visually they are like, why is he training that hard? Because like I'll be gasping for air and basically crying after a set of upright rows or something like that, my shoulders burned off. And a guy looking at me and be like, you got a competition coming up? I'm like, no, and he is like, why you're trying that hard. It's basically what he wants to say. It's kind of building to be good then, because the shit takes a long time building the foundations. Now, it's like hob-knobbing with a 'general' or something who is overseeing a huge military exercise, and you'll be like, "oh got any wars coming up?", and he'll be like, "no, probably none for a while hopefully", you'll be like, "why all this then?", like, "because we want to be ready when there is a war dick-hole not like when the Nazis are over the horizon, like, all right let's start exercising a little bit, let's get the soldiers ready you know that's how it works", and I think some people still have that ancestral model of like linearly ascending to sport preparation.

DANNY LENNON: Yeah, I completely agree. Just maybe to really split hairs on this, and maybe just to tie it back to the previous question. The final point you mentioned around potentially changing leverages when there is this change in bodyweight due to the loss of body tissue. Could people potentially be right in thinking, okay from going to route of like you mentioned previously with the weight cut of depleting glycogen to drop that bodyweight going into a meet, and we know it's not going to replenish. Is there a potential for that to work in a similar fashion, at least to a tiny degree, if you are used to training with full stores of glycogen in now you're kind of close to having very little at least?

MIKE ISRAETEL: Absolutely 100%, and that's another good reason that the meal after the weight cut – well first of all, in the weight cut itself like I would say, if you're doing sauna or some dehydration protocols you want to cut as little as possible to get just under. You don't want to be like, oh I – because people like the power lifters posted on Facebook, hallelujah weighed-in 2 kilos under, I guess I went in the sauna too long, and I'm like, mother fucker you got to weight-up are you out of your mind, that's not good. So, first of all don't cut anymore than you need, and second of all replenish as

much as you can without GI distress and sluggishness, because you want to be – power lifters have a really good system about this with a 24-hour weigh-in, you know they'll train at a certain bodyweight, so for example, someone in a 220 pound – 100 kilo weight class they'll train at 105 kilos. They'll make a 5 kilo cut in a 24-hour weigh-in and they have 24 hours to replenish which is more than enough time to most replenishment. How do they objectively if they've replenished enough? Well, do they weigh 105 on the morning they wake up of a meet? So, it's one of those things that – even with a 2-hour weigh-in you're not going to get back to everything you have, but you can get closer and the only downside is GI distress. So, if you have a stomach full of flushing fluid and you're trying to catch clean and jerks it's not good. But insofar as you can replenish enough to where you fill up enough, yeah, now unfortunately in 2 hours most of the fluid is not going to be incorporated into muscular tissue at that point nor is the carbohydrates. So, there's still going to be some tradeoff, and again that's one of those things where the people are looking for the optimal solution. There is no optimal there is just a best under the given circumstance, so if you have to cut water and carbs to make a weight class you're already admitting that your lifts won't be 100% of what they could be. But they could be 99.8% versus 99.2% and that would give you the gold medal, you know what I mean? So, when you have already cut do your best. It's kind of like, I mean, this is ridiculous now because there are tons of drugs involved, but if it's like Ellie and Eleanor and all those guys who are breaking clean and jerk, and snatch more records in training months out. When they get to the meet they don't break any world records or maybe they just break them by a little bit versus breaking them 10 kilos, and it's like what all the manipulations they made they knew all the time they weren't going to be coming in at their best, best because they actually drug test at the fucking Olympics and not in some fucking village in Kazakhstan or whatever, so you can bribe someone to clear you. I don't even know how that shit works, I've heard funny stories. But it's one of those things that they know that they're going to be at least at a certain good level good enough to beat everyone else. So, if you've decided that you're so lean that

you can't lose body fat, and that you're going to lose body water lose the minimum you have to, replenish as much as you can without causing GI distress, and just go for the best that you can do. Because if someone comes up to after the meet and say, well it looks like you like shit, and you're like, yeah I did my best. They are like; did you cut for this meet? I'm like, I had to cut glycogen. You know what recourse do they have. They could say, well you should have cut body fat, and you could be like, no I was already too lean, they are like, hmm you shouldn't have cut at all. I'm like; no I would have been on too higher weight class. Well, I guess you just did the best under the circumstances. You're like; exactly get the fuck out of my face. It's what I'd been saying the whole time, you know what I mean? It's kind of like a little tester I like to do with myself like before I make some kind of relatively big decision I kind of go through this logic of, if I was to criticize another version of myself from another dimension about doing this, what would I say, what kind of shit would I talk, what would I ask and how would I respond? If I can get through all those questions, and be like, no still doing the right thing given all the circumstances I need that to go, and sometimes be very possible best. Because I think there is a lesson here. Let's just get into this paralysis by analysis mode where they are like well this one comes with tradeoffs, and this option also comes with tradeoffs, and I don't want any tradeoffs I want a solution with no tradeoffs. Sometimes that just doesn't exist. I think I can even be comfortable saying most times it doesn't exist. So, I think just doing your best and knowing the tradeoffs are, and making the least of them is I think a really laudable goal versus trying to find the perfect program that makes no tradeoff whatsoever.

DANNY LENNON: Right, yeah. Maybe start your own federation with a new weight class that's perfect for you.

MIKE ISRAETEL: Fuck that, no weight classes' bro. In my federation the weight classes are floating weight classes, so any time I show you and whatever I weigh that's the top of the weight class, and I'm the only one allowed to compete. My Wilks formula is calculated completely differently than everybody else's. I get spotters no one else does. I get to use a thinner bar for dead lift, but a thicker bar for benches and squats. No dope

– no I'm sorry, I was going to say no doping control but that's bullshit. Crazy tight doping control for everyone else; me I'm provided with drugs by the federation.

DANNY LENNON: Excellent. I agree, as a smart man once said there are no weight classes in the jungle.

MIKE ISRAETEL: That's right, and then another very smart man said there are also no barbells or gyms. That's one of those descends into YouTube hell kind of arguments.

DANNY LENNON: Yeah, for sure. Just before we finish Mike I promised someone that I would bring up one or two questions around the volume landmark, so apologies that we're short on time. I know you've thought about these ad-nauseam, so we don't go into the depths of explaining each of these, and I'm going to link up in the show notes for people listening places where you've explained that elsewhere and some articles you've got on those volume landmarks, but just very briefly even just to name what they are, and even like one line to give people who haven't came across them what we're talking about just by that term volume landmarks, and then I'll just have one question before we wrap up.

MIKE ISRAETEL: Totally, yeah I'll get through real quick. By the way I'm super fine with speaking ad-nauseam about things I seemed to have dedicated my career to doing that. So, the volume landmarks are these theoretical – and theoretical not in the pretend sense, but in the lot of facts to support a grand theory sense. These theoretical ideas about how much you should train, and they make plenty of sense if you get a feel for what they are for you personally. You can use that theory to guide your training in a very logical direction, and to more so just prevent yourself from doing really dumb shit.

So, the first one that we hypothesized and one that has received the most attention is the MRV – Maximum Recoverable Volume in this theoretically the most amount of training you can do and still recover to perform equivalently or better the next time that you come in, and by definition if you exceed that regularly you start to experience a decrease where gluteus are not recovered, you know, you usually squat on a kilos for 10s, if you have not recovered in a

technical sense you can't squat for 10s you might squat for 9s or then squat for 8s, and then later squat for 7s or something. So, if you're chronically exceeding the maximum recoverable that means you are degrading your training too much.

On the opposite end of the spectrum we have the Minimum Effective Volume the MEV – Minimum Effective Volume is the least amount of training you need to do to actually see progress, and just a simple analogy is how much basketball play does your 7-year old niece need to get better. Well, you know if she dribbles the ball twice a week for 15 minutes she'll get better at basketball, because she has never seen the damn thing before. How much basketball does Lebron James need to play to get better, not just to maintain his skills? I don't know, 30 hours a week is something insane, right? Someone is like; hey I've got this cool training program it's like 2 sets of squats 2 times a week. You've got to ask the question, is that really enough to see any progress or is that just slowing down how fast you're losing your gains. So, by definition almost all beneficial training, except for a couple of weird caveats lies between an individual's minimum effective volume and their maximum recoverable. If you go higher than that it's too big you can't recover, you get worse. If you're going lower than that you're not really making any gains, because it's not enough volume to make a big difference, right? It's almost like selecting meal size, right? There's a certain amount of food that's going to fill you up and you're going to be happy, and there's a certain amount of food that's usually much higher than that that way too much and it's going to be painful. So, where do most good meals fall? Well, somewhere between those two values, right? There's not really much of an argument against any of that.

And then, another volume landmark that's a little bit below all those is what's called a "Maintenance Volume," and that's how little training can you get away with doing, and not get worse. So, for example if an athlete is taking some low volume phases to heal up from surgeries or heal up from training injuries or they're really tired or they're deloading how little volume can we do and still not experience a

degradation. Another good applications questions is, okay I'm going on holiday like you guys like to say you're up for a vacation in America for some damn reason, I'm going on a holiday to Australia, and Thailand and these other places for 6 weeks how little can I train and still keep my gains? Well, the maintenance volume is really what you're asking. How low can a volume be to maintain my gains? It turns out in a relatively advanced lifters and advanced athletes maintenance volume is considerably lower than minimum effective volume. So, if you are already really good to make you better you have to move heaven and earth to just keep you from getting worse. You don't have to do much at all; matter of fact in the lifting example if you can get to a gym twice a week and lift a couple of heavy sets of 8 reps or 5 reps compound heavy basics you won't lose muscle for literally a month or longer just by doing that. So, that's good news, right? If we didn't know that maintenance volume was different than minimum effective volume we'd have to make this decision like okay since I have to train at least 6 days a week for 2 hours at a time I'm not going to ruin my vacation doing that. There are lots of other things and people to do in Thailand instead of lift weights. I'm just not going to do it at all, I'm not going to lift weights and I'm just going to like build back from scratch. Well, that will be stupid if we knew the concept of minimum effective volume versus maintenance volume. We could say, okay maintenance volume for me is this, I know it before from past experience in monitoring my training I'm just going to do the bare minimum I need to keep my muscle, and then I won't have to take two steps back to take a couple of steps forward when I come back.

The last concept is super technical. It's MAV – Maximum Adaptive Volume, and that's just basically like what the optimal amount of volume is to train. It's somewhere between your minimum effective volume and maximum recoverable. For advanced individuals those two numbers are so similar that it's really pointless to talk about MAV. For beginners it's also pointless. MAV is not the most important concept. You would think it's the most important, because it answers the question of how much do we do to get

better, but the real answer is you generally start a training block at your minimum effective volume. You scale up volume during the time that you're training all the way up to your maximum recoverable. Deload, alter some variables and repeat, and that's probably the best way to logically structure training.

DANNY LENNON: Sure. So, if we are going with the idea of starting with certain amount of volume, and that's going to continually build across course of mesocycle till you reach your MRV or maybe slightly surpass it, someone is going to overreach, and then they hit a deload. With at least most of the discussions I've seen you have these and we're talking in the context of muscle growth, hypotrophy or at least maintaining muscle mass in a high workout situation. If we're talking about someone who is specifically looking at strength development, so again if we're looking at a strength athlete, if at all how does this concept change and in what ways or is there a better model that fits strength progress as in we know that volume is still really important. It's going to be of a different level of importance than driving hypertrophy, so is there differences in how this model works if we're going outside of hypertrophy and looking purely at strength increases over time?

MIKE ISRAETEL: Yeah, totally. So, we can actually look at all the other training variables, so we can look at power development, speed development in the sense like short-distance running speed and strength development. They are all very similar in a sense that the distance between the minimum effective volumes and the maximum recoverable volume is really small. Also, the stimulus that improves your ability to be stronger has more to do with increasing intensities that it does volumes. The progression to move from minimum effective volume to maximum recoverable volume involves increasing intensities more so than increasing volumes if you want to get stronger. A curious sort of addition to that or an integration is that higher intensities have lower MRVs and lower minimum effective volumes at any given volume. So, the more weight you lift the less sets and reps you have to do to still get the same effect and the same amount of fatigue. So, if you combine those two ideas together that there is a

narrow window, and you combine the idea that we have to make jumps primary intensity, and we combine with that idea that intensity really actually brings down the MRV closer to us and brings the MEV down as well. What we end up seeing is you can get a relative constancy of volume throughout a progression, but you progress in intensity as opposed to volume, and as a matter of fact in some power progressions and some strength peaking progressions the intensity jumps can be so big that the initial minimum effective volume is actually higher than the final at the end of the phase maximum recoverable volume, because remember maximum recoverable volume falls as your intensity goes up. If your intensity goes up enough your MRV can descend to below where your minimum effective volume used to be. So, let me put some more quick numbers on this to make it really simple. If you're doing sets of 5 at 75% 1 RM, okay that's say 3 sets of 5, right? That might be just about your minimum effective volume or sets of 5 at 70% 1 RM, and you may be able to survive 8 sets of 5 potentially, but you're just doing 3 sets of 5. As you raise the weight from 70 or certain percent of 1 RM, and you go to 80% or let's say 90% 1 RM. At 90% 1 RM 3 sets of 2; at 90% 1 RM maybe over your MRV for that intensity. So, what ends up happening is still to stay within the volume landmarks we actually have to reduce the volume our training as the mesocycle progresses. Now in most conventional strength training paradigms you don't have to reduce the volume you just have to keep volume counted in sets is about the same. Thus, as you keep about the same rep ranges your weights go up, but you set numbers aren't added in. There are caveats to this for beginners or relative beginners and early intermediates they can run a longer mesocycles of 6 to 8 weeks even in a strength phase, and they kind of – while 3 sets of 5 or 6 was shocking to them at first. It's no longer shocking later. They may start with 3 sets of 5, and work up to 4 or 5 sets of 5 at the end, right? But more advanced athletes may see such huge fatigue increases, and such huge effect increases with the intensity jumps that they may start at 5/5 then go to 2 weeks of 3/5, and end up at 2/3 at the end of the week just because the intensity is rising so high lowers the MRV so much and

we have to say under MRV, so it's still a concern we have to adjust.

DANNY LENNON: Perfect. I think that really outlines it well and I think even from that people could probably take a simple example if we're looking at in the sense of hypertrophy and we're looking at this increasing volume over the time and over the course of mesocycle. Some are going to essentially take the same load, and if they're even adding even 1 set per week they are accumulating more and more volume and that could be enough to give a stimulus, if I'm picking it up correct, and then we're on the strength side if you go from 4 sets to 5 sets to 6 sets and 7 sets over the course of mesocycle with the exact same load on the bar it's probably not going to do a whole pile for your strength at least comparative to what you could have, right?

MIKE ISRAETEL: No, and you have a certain amount of fatigue or kind of tolerance to work with you might as well put it work on managing fatigue that you've got from increasing intensities, because those are going to cause more strength improvements absolutely. In hypertrophy training it's probably a little bit more volume related than intensity related, but both are important. So, I would say in hypertrophy training it's good to increase the number of sets and a little bit the weight on the bar, but in strength you are going to want to increase mostly weight on the bar and sets if needed, but usually you just increase the weight on the bar more and it keeps you between your MEV and MRV. What I'll say is it's the same concept, but applied a little bit differently because conditions change. They still work. There is not a situation in which someone is going to say, okay here is your maximum recoverable volume for all these given conditions and I want you to exceed it for the following 4 weeks and that's a disaster either way you cut it, right? There is no situation in which someone is going to say, okay here is your minimum effective volume and we're going to really try to make progress, so we're going to go under that all the time. That's nonsense; even though those numbers could change they are still very relevant. One sport or one's training style in which they think even more irrelevant in arm hypertrophy is endurance training. I don't have a whole

lot of connections in endurance training world, but these concepts apply better to endurance training, and they apply incredibly well to sport training with a variety of demands, right? The way Dr. James Hoffmann and I came up with the MRV concept; he has been really good at applying it to sport training. He did a number of really good talks on this. It's easy to ignore these concepts when you're a power lifter and your only job is to lift weights, but let's say you play rugby you have to integrate weight training, technical, tactical preparation for the sport and a variety of other physical and psychological demands into a total ability to recover that's your total sport MRV. If one of your coaches says, hey we're going to double your weight training something else has to give or else if you pile everything on top of that you're going to be outside of your MRV and you're going to start to suck. So, in complicated sports with a variety of fitness characteristics and in endurance sport these volume concepts are even more critical, because look if you exceed your MRV in endurance running you just may never recover period. Career level overtraining, so it's one of the situations where I think theoretically whatever kind of athletic background you're from – you know we've got a book on volume landmarks coming out in a couple of months here. We just finished the rough draft. It's a good thing to think about, to give some thought about and just ask yourself some basic questions. How much training am I doing, and to why am I doing this much training? When you can answer those and they are safely squared away between the minimum effective volume and maximum recoverable most of the time, you are doing yourself a good service. If you are not sure you could be thinking about it harder.

DANNY LENNON: Yeah, for sure and I've definitely seen how that applies particularly into other sports, and what comes to my mind at least is if you look at people involved with MMA who have various different coaches who are pulling them in different directions, and I've even worked with guys where they have – they are working with some strength conditioning guy who is completely detached from the world of martial arts, and he is just hammering guys or they are even doing worst going off and doing their own stuff, right, and they are just 4-5

sessions a week that they could have probably saved and actually done more use with or even put it towards recovery, but they seem like a particularly at risk group for sure.

MIKE ISRAETEL: Oh, my god. A bunch of examples in our books are actually leading into MMA, because Dr. Hoffmann trains in kickboxing and I train in Brazilian jujitsu, so this is really, really pertinent to us. You can feel it on the mats, and hitting the bag, and hitting other people you can tell when your fatigue is too high and you know that you just can't add stuff. But if someone is from a coaching background or some – a lot of fighters are such tough people they barely even feel when they are tired, you know what I mean, which is great psychologically but it's bad from an auto-regulation perspective because they could be getting better training if they were simply wear the states, you know what I mean? So, it's one of the situations where MRV concept particularly is super important in those combination sport training scenarios and when someone comes in and you're like, hey so how many sessions of jujitsu, and kickboxing, and weight training do you do per week and what's that adding up to, and they are like, I'm not really sure. That's not a good thing, you know what I mean? It's funny enough when Dr. Hoffmann and I were both in a PhD program in a East Tennessee State we had a really interesting program there called "The SPEC Program" – sport performance enhancement consortium, and it was a very successful attempt by the directors of the program to get every team that we helped with, because all the PhD students would help coach the teams of the university rep. Every team that we helped with had a SPEC sort of this meeting, this group, which was composed of all the sports coaches, including the assistant coaches, all the sport scientists, strength and conditioning staff, and all of the athletic trainers and medical doctors that worked with the team. They got together and looked at that total amount of work everyone was doing. Decided as a group where should we put more emphasis on which phase, because you know what does the strength staff always want to do; just fuck and hammer everyone into more strength work possible because they think it's even more important than the sport training. Ideally what do most

coaches want to do they want to forget strength training ever existed and just do more sport coaching, and what are the athletic trainers always saying; well everyone is getting hurt doing everything, so let's just stop training right now altogether, right? You bring everyone in a room together they negotiate and they end up with this amount of training and these tradeoffs that are the most logical hopefully. It was from viewing that model that myself and Dr. Hoffmann really kind of developed the MRV idea, because there was never really a time when people said this is why you shouldn't train too much. But we really just put a term to it like there is an amount of training, a maximum recoverable volume above which it is pointless to train because you will simply get worse. And you know as well as I do Danny that a lot of – like if I told that to a lot of coaches they have to think about it for a second. Now, a lot of coaches will be like, well of course damn and they're already getting into the healing concept, but too many coaches and way too many athletes of you told them that they are like, hmm, like I literally had people that tell me like, well this isn't like mind over matter, and I'm like, oh god are you fucking serious. I think it's a lot to do with attitude like, okay that's nice get the fuck out of my way you have no idea about coaching.

DANNY LENNON: How you feel is a lolle man. How you feel as a lolle?

MIKE ISRAETEL: Yeah, you know certainly can be true for a couple of weeks, but if you hammer you know they'll be like it's all the mind, great do 10/10 squats every day and let me know how you feel. No amount of hypnosis is going to save your quad tendons from that, sure.

DANNY LENNON: For sure. I've definitely seen with some of the MMA guys. I actually fairly recently I asked one of the guys are you feeling fatigued right now? And his response was not enough. So, there you go that's something to chase. Mike I'm wrapping this up, because you've already been way too kind with your time. Before I let you go where can people find you in social media and all that type of stuff and what else you want to let them know about that they might be interested from that you've got for them.

MIKE ISRAETEL: Cool, yeah. Social media at RP Strength that's Renaissance Periodizations that company that I work for and co-founded, at RP Strength on Instagram we have all kinds of cool pictures of stuff, I guess that's kind of irrelevant statement because that's all Instagram is, at RP Dr. Mike at Instagram it's mostly pictures of not so delicious food I eat, and pictures of me half-naked in front of mirrors around gyms, and much more content oriented is my Facebook; Mike Israetel on Facebook it's a public account if you come follow me then I talk about training and training all the time. I posted a bunch of videos. And renaissanceperiodization.com is really cool, but we got this new thing RP Plus members.renaissanceperiodization.com and if you Google RP Plus Periodization Training Renaissance it'll come up. It's a membership site where you get exclusive access to about two new video lectures per week about all sort of really in-depth sports science topics. You also get access to a weekly seminar; myself and James do answering, any questions any level of depth, directly to the people and there's always room for more questions, and we have a forum where our sort of junior experts at Renaissance answer questions about how interpret books, templates, etc, so RP Plus I'm over there, like I said, I don't have any friends in real life, so I'm there all the time begging for conversations really pathetically.

DANNY LENNON: Well, it's been doing you no harm so far. Plenty of e-friends to keep you busy.

MIKE ISRAETEL: Yes, e-friends.

DANNY LENNON: Mike thank you so much for taking time out to do this. It's very much appreciated and I appreciate you coming on man.

MIKE ISRAETEL: Thank you for having me, awesome.

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