DANNY LENNON: Ben, welcome to the podcast, sir. How are you doing?

BEN HOUSE: I'm doing well. The weather's been fantastic here in Costa Rica for the last couple of weeks which has been nice.

DANNY LENNON: Yeah, I'm sure you're probably pretty much used to better weather where you are than where I am right now in Ireland, but we've actually got a lovely day today, so I can't complain, make the most of it, one of these rare sunny days. So we've got lots to talk about, I've got lots of specifics I would like to get your thoughts on; but maybe just to kick things off, to give people a bit of context for where some of this is coming from, how would you typically introduce people to what it is you do and anything relevant in your background that might relate to what we're going to chat about today I guess?

BEN HOUSE: Yeah, so I have a PhD in nutrition from the University of Texas at Austin, I've consulted with pro sports teams, worked with UT basketball for a while. I work primarily with nutrition but I delve into – I have research ADD so I delve into a lot of different topics, and I'm a bro at heart, I've been lifting since I was 12 years old, so that's like I've been lifting

almost doubly as long as I've not been lifting which is pretty fun. And so the big things that that kind of led me on fire are these nuanced topics of really hypertrophy and strength, but even more so hypertrophy because strength is more rep range specific, task specific, whereas hypertrophy is pretty, it's not easy to measure, but as far as a strength conditioning goal, it's a little bit cleaner.

DANNY LENNON: Yes, so just on that I think one of the things that I find most fascinating about the topics you tend to bring up or at least some of the stuff we're going to talk about today of why you're trying to investigate answering some of these questions is, as you say, there are some really interesting nuanced questions when we consider say hypertrophy for the types of questions that you and others at a very advanced level of lifting would typically be most interested in. However, kind of, paradoxically, that's the area where it's most difficult to get really good answers when we're looking at science generally for probably a number of reasons we'll discuss today where that's subject pools, the protocols, funding, etc. but it tends to be that kind of paradox of the area that's most difficult to get at some of these interesting questions are those same interesting nuanced questions to the people who are really love lifting and building muscle, right?

BEN HOUSE: Yeah, and these questions don't necessarily matter to 99% of the population nor should they, we're talking about, like, the minimal effective dose for hypertrophy – like, can argue that hypertrophy is that body composition changes are pretty much what most of the general population is after; and you can get those relatively easy, like, you can... We're in the land of depreciating returns. And so getting there is great, but once you've got there, you realize you're in love with the process now, and so that's the fun part is now, all of a sudden, all these nuances start to matter, like, in the beginning you can put on muscles just buy bike

riding or jumping around, but that's not going to – once you've been training for a couple decades, everything starts to matter and that's a cool place to me, because not that I don't like the research where how many times does someone who's never trained need to train, that research is cool, but that's not the thing that necessarily is going to light me on fire.

DANNY LENNON: Yeah, I guess, it's at those extremes where we start to really have to answer interesting questions about physiology and these tiny little differences and how they compound over time which makes it so fascinating.

BEN HOUSE: Yeah, you honestly get a lot of tribalism around things that aren't necessarily – we don't have any good data on it, so a lot of, you form... You get a lot of guruism, you get a lot of... Because we just don't have the data in this specific population.

DANNY LENNON: Yeah, that's actually a really good point that it's those areas where we don't have clear-cut answers right now that are probably most susceptible to that guruism, as you say. But to keep in with kind of the main theme that I wanted to open up with, I think, maybe a good kind of segue into some of that discussion would be to give an overview of maybe what we'll call the lean bulking study that you are looking at and this idea of trying to answer some of these questions through what you're doing. Can you maybe just give people an overview of what it is that you are doing in an attempt to answer one of these interesting questions?

BEN HOUSE: Yeah, so the main question is, is it possible this is my kind of, my main question with this study, is it possible for people with a very, very high FFMI, so say above 23 – and FFMI is Fat Free Mass Index, so that's a measure of how much muscle mass you can put on your frame, and this is only in males, we just don't have as much data in females as far as FFMIs, they might be about five points lower than men, and

you can just google it and find that out. So in very trained lifters, is it possible to gain muscle mass on a relatively low access of calories? So in our specific protocol it's 1% bodyweight per month about, so that's, if you're 200 pounds, it's about 200 pounds or that's about 2 pounds per month. And so we're going to – and then this study is 16 weeks long, so it's a little bit longer than most of the trials that you see out there. And so we're trying to trying to assess is it even possible for highly, highly trained male athletes to put on muscle mass when you have accounted for things like training volume, we're going to grab pre and post bloodwork, so we're also going to grab some sleep markers, and so we're trying to take into account as much of this stuff as we can, and then look at, really, to me, it's an efficacy trial of is this even – can you even do this at low amounts of excess calories. Because that's essentially the question that we don't really even have data on. We have data pretty bad – there's only two studies that really talk about, that have really looked at this question in the peer-reviewed research and one of them is a 2013 study out of Norway, and then the other one is our very recent study out of Brazil. And so those two studies are – the Brazil one has a lot of problems. It's only four weeks long, it has a more highly trained population but it is – they don't have their metrics for looking at muscle mass gain are pretty poor. So they use the skin folds; whereas the Garth paper is, just reading it, you can tell they have more money behind it, they definitely had funding, it's in 39 elite athletes. But the problem was so this GAR study gets, it's the study that everybody hangs their hat on for this idea that if you increase calories by and absorb an amount, it's not going to matter, you're just going to gain fat, so you're going to gain.

And so that's kind of the big question is no one wants to get chubby, I don't think, that's never anybody's goal when they start a training protocol, like, oh, I'm going to start this next 16-weeks block and my goal is to get really

chubby, like, no one says that. But is that, when you're an advanced trainee, is that something that is necessary, and that's kind of my underlying – because if you want to put on muscle. like who has the highest FFMI? its strongmen and it's sumo wrestlers because they don't have to worry about how much fat they put on. And so that's the basic gist of the study, is it possible to accrue body fat or essentially lean body mass without accruing much fat, if any, at all.

DANNY LENNON: Right. So really trying to get at this idea, particularly in extremely well-trained, let's say, if we want to use the word, elite people, that something like a very small surplus may not be optimal for the amount of muscle that we're wanting to gain and that there may be some unique benefits to those bigger surpluses even if they do come with much more fat mass. And I think that's really, like, I'm trying to think of the [Ina] Garthe study; been quite a while since I read it, but I know that the difference in lean body mass – was it like 1.7 to 1.2 or something?

BEN HOUSE: 1.7 to 1.2, yeah, you are exactly right.

DANNY LENNON: Yeah, so that's not a trivial amount, right, that's a real difference for certain people depending on who we're talking about. So at least gives us some hope that there could be something going on.

BEN HOUSE: Yes, so my problem with the GAR study is that, if you look at – if you really, really dig deep into that study in the subject pool there the FFMIs of those participants were anywhere from 18 to 20. So even though they were elite athletes in their sport like ice hockey and taekwondo and kayaking, they were novices or newbies in terms of their muscle mass. And so that's, if we really look, and also, it's a really weird study in that they had 17, they averaged 17 hours of sports specific training on top of hypertrophy. And that wasn't controlled, so now you have this – you have an unintended concurrent training model and then they picked out the

people that gained more than 4% bodyweight in about 10 weeks. And so my big question with that paper is how much muscle mass can someone in that situation put on? Because I don't think calories are necessarily the limiter at that point. Does that make sense – because the group that gained more muscle mass, ate more calories, that gained more fat, but maybe these guys were just at their ceiling of how much muscle they could put on in that specific period, so it didn't necessarily matter the amount of excess calories that they were putting on, that they had in their diet. And then they had two groups, they had nutritional counseling group which did better. And so my big takeaway from that study is if you have elite athletes and you want them to follow some type of nutritional protocol, even if it is a gaming protocol, they did, as far as the study's goals, they did so much better. They were about 42% effective in meeting this weight gain goal, whereas the group that they just told, like, hey, I want you to eat to gain weight, only one person in that entire group met the goal of the study, they just couldn't do it.

And so that was my big takeaway. When you're working with elite level athletes who have these concurrent demands on their schedule, and if you've worked with these athletes, you understand that we have ideal and then we have what's possible given the logistics of this person's life. And if you just read that study and you haven't necessarily worked with that population, you're not taking that into account. So I like that study, it's really interesting, they're also like, I think, their one rep max back squat was like 240-250, so these guys were not, as much as like – so the problem is that study is the one that... And I always encourage people like, the study that everybody cites for something, go find that study and look at that study and really dissect it, so the other study that gets thrown around like less volume is better than more volume, that was this Gonzalez Badio paper, same situation that was probably not applicable to a lot of what were

physique athletes because it was the same thing, it was in elite weightlifters which is not the same as if you're trying to gain – if you're 200 pounds and 11% body fat and you want to gain five more pounds of muscle in your life. It's a completely different population pool.

DANNY LENNON: Right yeah, and I think we should really hammer on this point of the subject pool, specifically in relation to your study which is what I thought was the most cool about this is that not only are we looking at say we can typically think of different groups as we have people who just don't do any activity, you could have recreational or sometimes in studies we will see even like well-trained, but there's probably that difference between being well-trained as what is defined in research to someone who is really well-trained and then even above that there's this extra level which is what you're actually looking at, people close to that muscular potential, there's almost like no bracket that they would fit into in typical terminology we see in research studies because the difference between someone close to their muscular potential versus someone who is really well-trained or experienced by most standards or cutoffs that we would look at in studies, that's a dramatic difference, that's a very real thing.

BEN HOUSE: Yeah, we're talking probably five to 10 years of training and like that, I would – so if you think about someone who's at 85% of their genetic potential which is going to blow the doors off of, like, in terms of study populations that we see in the literature, like, if you're 85% of the way to your genetic potential as far as muscle mass naturally, you are going to be the most trained pop participant probably in that study. But 85% is a lot different than 97-98% of your myogenic potential. Those are completely different subject pools. We're talking about people that get excited if they've gained maybe 10 pounds in their bench in a year, like, it's a very – and so, with that, like, Eric Helms and I talked a lot about this is these things just

become very, very hard to measure, and not just hard to measure, period, like, because if you think about how do we measure muscle mass, well, DEXA is the gold standard that has error rates of 1 to 4%. There's so much noise in that metric itself, like, it's not even been able to pick that up and then if you've ever done an ultrasound measurement on a cross-section, so the thing we're left with, to me is really are you getting stronger, if you want a marker for if you're getting bigger, that's cheap, it's are you getting stronger and really stupid lifts like ones without a lot of technical coordination, and so like tricep extension or a preacher curl or some kind of machine press, like those are probably really good indicators that you probably are putting on muscle mass, if you're getting stronger in those because they don't have a larger neural component, they're pretty dumb. And so that's where I think that we really need to take into account is if what is our timeframe with these studies, because if you have, that's the big problem with the study out of Brazil, was that they had a relatively – they had a highly-trained population, but it was four weeks long and they did some skin folds which has a ton of noise; and then they found one group gained, they gained close to, I think, 3 or 4 pounds of muscle mass in four weeks, like, that's just not feasible. So that's just a huge red flag from the beginning, that study was, it's worth reading, but it's loaded, it's not ideal from a study designer standpoint.

DANNY LENNON: So with your recruitment of people that you wanted to include in the study you're running, can you maybe just remind me again of what that inclusion criteria or what are some of those benchmarks that would allow someone to be classified as close to that muscular potential?

BEN HOUSE: Our big benchmark, and I wouldn't even think, like, if we use – I don't think someone at 22.5 of FFMI is really that trained, so I don't know that our subject pool is – it's definitely more highly trained than you would typically get.

Eric's doing a similar study in New Zealand right now and they're looking at, they have three arms, and they're looking at a control group and then a 5% over surplus, and then a 15% over surplus. We're just looking at – our inclusion criteria are a little bit stricter, in that, for the study we're at 22.5 on the FFMI in males and then a body fat percentage less than 15% via DEXA, so that's going to weed out a lot of people who say they're trained, but they're not really trained. And then one of the big things that – one of my favorite inclusion criteria that we do have is that we have a back spot of at least two times bodyweight, not that that necessarily matters, but I want it to be within 5% of the historical best lift. So I think one of the other problems that we can get into is maybe you were really big when you're 23 and you lost some of that muscle, and it's probably going to be really easy for me to put that back on you. So that's kind of what we want to stay away from so we want people to be close to their historical best lifts so that we're not just putting on muscle that they already put on in the past.

DANNY LENNON: Yeah, that's really smart, and I think that was one of the problems, the big one that comes to mind is the Tom Longland study where they had people gain muscle in a 40% calorie deficit, but again these people – I think they were college athletes who had essentially been detrained over the summer they had off, came back, get into the study and gained this muscle in a huge deficit, and maybe one of the confounders there of like that detraining effect. So that's really cool that you've been able to account for that by keeping their strength numbers close to their historical best. With training across the 16 weeks, how have you accounted for that given the types of people you're bringing into study or what was the training component look like?

BEN HOUSE: Yeah, what's a training component, so we have a run-in – so we have a volume accumulation period of five weeks where we just get people

used to the amounts of volume that they're going to have to undergo for the study; and then for every muscle group you're going to – everyone's going to be at about 15 sets per week per muscle group, and it's on a six-day upper-lower split. So our training frequency will be three times per week and then split up over that, so that's kind of, if you look at the most recent literature on training volume and training frequency, it kind of fits the bills for that. And so the other thing that we're going to do is we're going to do some velocity based testing, pre and post, so we have some other – so whenever you design these studies you kind of – if you're going to have access to a certain population, like so, for instance, my PhD, I ran a metabolic study where we did MRIs, DEXAs BOD POD measurements, recalls, all – we just like collected as much data as we could just because we were having access to a... we were looking at high school, freshmen Hispanics in college, so this was a nuanced population and we wanted to get as much data as we can.

So, pre and post, we're going to do some – I'm actually a little bit more jazzed up about some of the acute stuff, is we're going to see this is kind of a sub-hypothesis for me is look at how quickly people can recover, so we're going to train people full body four days in a row and we're going to look at muscle damage markers, and also just like cell swelling and things as much as we can, and also just performance outcomes, so like average concentric velocity. And so we're going to train them four days in a row, same protocol and see who can recover in terms of that time period, and I think those might be the people, those might be your responders, just the people that can – because that's another area of researchers, we don't necessarily know how long it takes people to recover. So if you do like 10 sets to failure, how long is it going to take you to recover from that? Whereas if you do two sets to failure, you might be able to come back in 24 hours and train again. And if you do two sets to an eight or nine RP, you might be able to train later that

day. And so if you think about mechanistically what are we after in these people, well, they're highly trained, so their muscle protein synthesis response after training is going to be blunt, it's not going to be as much as it would be if you're a novice which is going to be like a week; whereas if you're highly trained, it's going to be 24 to 36 hours. So if you can bang that hammer as often as possible mechanistically, that mechanistic data doesn't always pan out with your longitudinal trials; but hypothetically, that would be your ideal way to train.

DANNY LENNON: With the nutrition is that like a tract intake or is it the food provided to people or what way are you setting up to the tracking of their food intake?

BEN HOUSE: Yes, one of our, like, our stipulation, so we're probably going to get mostly bodybuilders for this study would be my guess is because we want people to have a year experience logging their intakes, because that's just going to be really important. So we're going to have everything inputted daily on Google Sheets and then their data will be reviewed every two weeks with a coach. And so then, from the dietary side, we have, you know, they're just trying to hit certain thresholds so we need them to hit a fat of 1 gram per kilogram and then protein at 1.8 grams per kilogram per day, and then we'll pick up the majority – we'll pick up the rest from carbohydrates just because that's kind of where the bulk of the literature seems to be. If you're trying to minimize fat gain, you probably want to stay away from having your access of calories in fat, because that'll just be a little bit easier for your body to convert to, like, not convert, but just take that fat and put it into fat. The same thing will happen, so your body will do the same thing if you overeat another macronutrient, it'll just metabolize that nutrient instead of fat and then it'll put the dietary fat into... So it's just as controlled as we can, the majority of the access will come from carbohydrates just to stay in

line with just with the other research, because if you start messing with glycogen and water you're just going to get a lot more noise.

DANNY LENNON: With this type of question, there's just probably a number of sub questions that really tie into what is being looked at and in this general idea of how much, if any, of a surplus is required for optimizing muscle gain, particularly in advanced trainees where kind of one part would be looking at, well, if we have muscle protein balance at a point that is "optimal" based on our protein feedings per meal doses distribution and so on, and then there's enough energy that someone is actually able to recover from those sessions, and the training stimulus of course is appropriate, is there going to be an inherent extra advantage to consuming either some more energy to provide that or again even greater energy with some increased overall gain in mass from fat mass as well going to provide that extra benefit – so with all of that, what is your, either, hypothesis at this point, or what have you, up to this point, in lieu of having actually answers via research, where would kind of your inkling be on probably two parts, one without an excess of calories can you still gain at that "maximal rate" provided you're recovering, giving enough stimulus, and your protein feeding is okay, and then, I suppose, second question, if there is an inherent benefit to having a surplus, is there a case that someone can make that a surplus that actually leads to even more fat mass that in itself can provide more hypertrophy of the muscle?

BEN HOUSE: So this is getting completely anecdotal but also probably applicable for a lot of people, I think that if – so say you're highly trained but you've never really done bodybuilding training before. You can probably – I think that you can probably gain muscle using a maintenance like approach without gaining any fat just because you have muscles that are relatively untrained. So say you've been doing CrossFit or like any just type of like a good strength auditioning protocol that doesn't have a ton of anterior

delt, like a ton of posterior medial delt volume or like some of the things, like you have never done leg extensions or leg press to a significant degree for a long period of time, I think there you probably have runway on certain lifts that are going to get you some hypertrophy and that you could wreak up even if you're advanced. I think if you're truly advanced and you've run out of runway on the majority of lifts then I don't know that recomposition is possible, I don't know that you can stay the same weight; because eventually if you're pretty lean, you're just going to run out of energy to get that done, so that's kind of the – to me, that's the biggest question is if you... So I'm like 85 kilos, like 11% body fat and all this really comes down to me search, like, these are fun – I love these questions because like when I look at these subject populations like that I'm the person that I want to see like is it possible to put on more muscle naturally. And so, if we have all our T's crossed and all our I's dotted, and so the question really becomes, in the downside, it's really an opportunity cost problem like an economics problem, in that, if you try to wreak up for six months, like, if you try to stay at maintenance, there's definitely some positives to that, like, you're going to figure out how many, like, what is the max amount of calories that you can eat and stay weight stable.

And I think that is the most important data point for advanced trainees to get, and not many people, surprisingly, not many people have that data point. And so – because that's going to be pretty individual, so when you see a lot of these studies or like they're at 50 kcals per kilogram or 48 kcals per kilogram, but those are arbitrary numbers, like you want to figure out where your maintenance calories are for your training volume and everything like that; and then once you have your maintenance calories, then you can kind of go above them, and so there's a lot of differing opinions given that we don't have a ton of research on this, like, Meno generally will say 1 to 3%, and then there's some people there like a 1 to 3% excess,

and I would agree in theory, like, you probably want to be – but if you're eating 3000 calories, it's like 30 to 100 calories, that's really hard if you've ever tracked your nutritional intake, it's really hard to account for 30 to 100 calories, you're going to have to be a robot to be to be that accurate and that precise. And then if you look at Schoenfeld stuff, it's like, you probably want to be between 250 and 500 calories excess, that's going to be a little bit easier to make sure that you're hitting on a daily basis. And then other people are at – like the most recent paper by Racky was they're kind of 10%, and so that's actually pretty high, that's kind of where I would lean towards. So for me, the really big question comes down to logistics for the person.

So step one is maximizing training volume, maximizing training frequency, and figuring out maintenance calories; and then if you're not gaining then, if you're no longer gaining, then you have one choice, and that's to gain weight, that's to increase your caloric intake; because from a mechanistic standpoint, it looks like that is, it's going to help from a muscle. Your muscle protein synthesis response may be blunted, it's definitely blunted when you're in a deficit definitely, but it also might be blunted even at maintenance. And so that's kind of theory that at – and that would be an interesting acute study is if you put highly trained people in maintenance and looked at their MPS response and looked at, is it significantly different than people who are eating 500 calorie excess, that would, I don't believe we have that data, but that would be an interesting study mechanistically. But what I see in in practice is this idea of being at an excess of calories chronically is probably really, really, really important, and it likely does matter to the degree that you're in a caloric excess, it's just going to be really hard to pick out the signal-to-noise ratio if you have a very slight excess. Does that make sense?

DANNY LENNON: Yeah, absolutely. And that's actually a point that Eric mentioned to me when I was talking to him a few months back the idea that we shouldn't equate, let's say, certain, if you were to take, again, just a hypothetically periods of time where you're in a surplus for a couple of weeks and then you come out with that surplus and you keep cycling back and forth of that for many months, and, let's say, you were to accumulate 20 weeks of "surplus weeks", that is not the same thing as having those 20 kind of back-to-back or in a row, that there seems to be something about having an extended period of time where you're giving that kind of anabolic stimulus continually that is different from this constant changing from, I'm going to start gaining, and then, oh, a couple weeks later, someone gets uncomfortable with their body fat, and so they start doing another cutting phase again that there seems to be at least anecdotally people report something to that patients of staying within that surplus chronically as you just outlined.

BEN HOUSE: Yeah, I would agree with that, and also from the context of, number one, you definitely see people even do that on a weekly basis is like their excess of calories is in on Saturday and Sunday, and then they are in a deficit the rest of the week, I don't think that's where, we want a chronic surplus of calories; and I think where that's going to, if you think about mechanistically where that's going to come into effect is, hypertrophy is primarily attention based mechanism. So like mechanical tension on the muscle is going to tell your muscle to get bigger. And so if you are able to gain weight, you are probably able to drive more mechanical tension and that, and you want to stack – he's exactly right, and now, you're just trying to stack winning weeks on top of winning weeks, and that's the game.

DANNY LENNON: I wonder one thing when – and this is again from a psychological and anecdotal level of when we consider those two different approaches, and there's many more subtypes,

but two general approaches when we look at how fast to gain weight, and therefore, in combination with that, how large a deficit should it be; and we see quite smart people that I think know the literature relatively well have different approaches to this in terms of how large of a surplus they aim for and how fast they aim to gain weight month to month in gaining phases. And I wonder sometimes, which one might be useful for any one individual often come down to a psychological perspective, and so I'd be interested to ask if you've seen this in any people about certain people might like the idea of having a specific focus on a certain phase. So if they're gaining faster and have this dedicated gaining phase and then they have to switch more regularly to say a mini cut or a deficit for a few weeks to bring that body fat down a bit and keep going back with these dedicated phases, that might keep some degree of interest for that particular individual compared to if they're on a consistent slight surplus but for many, many months in a row where it's kind of the same thing of just getting weeks done together with this slight surplus, continually chugging along, as opposed to these rapid changes in bodyweight week to week and then these mini cut phases where the focus is changing; and I just sometimes wonder, is it maybe a personality trait or kind of psychological preference some people have for one versus the other? I don't know if you've ever seen that in certain people.

BEN HOUSE: From my understanding, RP, Renaissance Periodization, tends to be a little bit more heavy-handed with their weight gain protocols, like they're like 2% – and I might be wrong about this, and it's not just them, there's some people that they're at 2% per month. And I think that if you are super-advanced, that is safer, I think that's safer because you know you're going to be in an excess of calories, you know you're gaining weight. It's when you're trying to get after these like minuscule changes, you're running the risk of not doing anything.

And so it's really a time-based question of, hey, if you have, because we are generally going to window people in body fat percentages, like, there's also debate about where is the high-end that you want to go to, and so that's actually a pretty interesting question, in that, do we want guys to get over 15% body fat, 17% body fat, because if you think about it, if you get – the brain really does have these stopgaps, these metabolic adaptations when you lose too much weight, it doesn't like fat loss; it gets used to your highest level of body fat, like, highest little level of body fat onboard. So if you gain a lot of body fat and then you lose it back, it can be really, really hard to maintain that. So that's kind of what – that would be my biggest worry with the dirty bulk stuff is like if you get to 250 pounds or what would that be in kilos, it's like 115 kilos, if you get there and then you got to – then your goal is to be 200 pounds; so you went up to 250 and your goal is to be 200 pounds or 95 kilos at 10% body fat, and that's where you want to live. Now you're 50 pounds off your max, so you're essentially, you're 20%, you're living at a 20% weight loss from your brain's perspective. So now you might get food obsessed, you might have a lot of the same psychological symptoms that we see in people who have maintained long term weight loss.

So that's what I kind of want – that's where the dirty bulk goes bad in my opinion. Now, if you're just windowing from 11 to 15%, and say you get from 11 to 15% in four weeks, and then you got a drop again, I think that's also a waste of time, in that you're putting off, you're just, you're going to have to do too many mini cuts, because you're just getting too chubby. But if you go from 11 to 15% over 16 weeks and then you spend four to six weeks or six to eight weeks, dropping that down, and then doing it all over again, that could be a perfectly viable strategy. And then there's also the novelty aspect and then working with individual people, some people, and this is really, really common, especially with Instagram and having – if you're actually a trainer who meets with

people, they might have these expectations of themselves that they have to look a certain way so they don't necessarily ever want to get up there, maybe they always need visible abs because of their job. And so that's going to be – they are pigeonholed in what they can do just because they can't manipulate their body fat percentage. But I think if you're unattached your body fat percentage, then you can just window it up, go from 11 to 15% body fat and then cut and then go back, and that's what you see people doing chronically.

DANNY LENNON: Yeah, that's a really good point, and I think trying to nail down what exactly, if there is one exact kind of range to kind of cycle between is a fascinating one to consider, and one more kind of theoretically at least issue that could happen with a kind of chronic dirty bulk where body fat gets, let's say, it's going beyond 20% for a long period of time and someone's continuing to gain, you could start to think about the degree of say insulin resistance at the muscle and does that have some sort of impact on maybe nutrient partitioning or how much of that weight from then on becomes muscle to fat, and does that ratio change over time as someone's body fat gets higher and higher.

BEN HOUSE: That is a nuance. There is some research that says once you go over 17%, your nutrient partitioning isn't – you're going to have those decrements that you talked about, and that it's not necessarily going to be ideal for a muscle gain. And the metabolics, the muscle is super protective for metabolic health, and so, if you're listening to this, and you're not super-jacked, if you want to increase your metabolic health rather than worrying about aikido or whatever you're doing, just focus on putting on muscle mass, and you're going to – and maybe losing body fat, but mostly just putting on muscle mass, and you're probably going to be metabolically healthier.

DANNY LENNON: Yeah, man, amen to that, that's something I think just the value of lifting weights across the

life course has such a potent effect that it's almost one thing that universally, I think, most people should probably agree on, that is just a good thing. Some degree of resistance training has such a profound impact in almost every individual, so yeah, I completely echo your sentiment there. We are just coming close to time Ben, this has gone so fast already. Before I get to my very final question, I'm sure there's lots of people listening that are really interested to keep up-to-date with what you've got going on, not only with this study but in general. So for those people, where is the best places on the internet for them to connect with you, contact you, or anywhere else you'd like to send them?

BEN HOUSE: Yeah, Facebook and Instagram are probably where I put up most of my content. You can search for me at Ben House, you can follow me. And then at drbenhouse on Instagram, those are probably the – that's where I put out the bulk of my content, the study is out of – we have a consortium of bros, so that's called Bro Research, and so it's legit, we have a website and everything. So that's broresearch.com, that's where the study that I'm talking about, that's who's operating this, that's who's – essentially, it's self-funded, and the study, if you want to be a participant, if you fit the bill, you can shoot me an email. There's two training camps, so there's one training camp in Costa Rica where we're going to do all the data collection; and then there's another training camp in Texas, in San Antonio where we will do the follow-up data collection; and then the actual 16 weeks of training, you will have a remote coach that will check in on you.

DANNY LENNON: Amazing. So there you go people. Go get yourself involved and do your bit for science. And everything else that Ben just mentioned there, I will link up to in the show notes, and I thoroughly encourage you to go and check all of that out and keep up-to-date with what Ben is doing. So Ben that brings us to the final question that I always end the podcast on, and this can be completely divorced from anything

we've discussed so far today. So more of a general broad question and it's simply: if you could advise people to do one thing each day that would have some positive impact on any area of their life, what would that one thing be?

BEN HOUSE: Meditation. So for me, I have two keystone habits in my life, and this is completely anecdotal, but the research does support this, in that what we're after with most people is behavior change. And so I think, for me, when I'm training, everything else is in line; but also meditation team seems to help those other habits stay on track; and so, it doesn't have to be a lot; I think that if you can just sit and headspace, there's lots of good guided meditation apps, but just taking that time to, and there's tons of different types of meditation, focused attention, just being aware of your thoughts, I think that that will reverberate and ripple out into your life in ways that you might not expect. And it's ironic, because if you get into the Buddhist texts and meditation, it's like this idea of not gaining anything or no attainment, and so, now, in our western world, we've kind of taken that, like, do meditation, because you'll get all these things. But to me, it's just a practice that in our current world that is so noisy just to have that practice and that time. It's going to be scary for people in the beginning just to not have their phones or have a constant stream of information; but for your mental health and for your ability to do a lot of these things long-term and to just be a good person, the research has actually found that people who meditate, you can actually become kinder and more compassionate. So that's cool. But that would be my one thing, because I think it helps keep the wheels on the bus for a lot of people.

DANNY LENNON: Amazing. Thank you so much, not only for that Ben but for the conversation today. I really enjoy seeing what you've been doing and for giving up your time is very kind, and thanks so much for doing this man.

BEN HOUSE: I appreciate you man. Thanks for everything you put out, it's always great content, and it's been a pleasure and honor.

Support Sigma Nutrition on Patreon!