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How to Earn Your Best-Ever Back Squat

Nick Collias: Hi, everybody. Nick Collias, an editor for Bodybuilding.com, here. No video today, alas, because our guest is over Skype and I didn't think anybody really wanted to be watching me sit here stroke my chin and stare at the screen. If that is your sort of thing, feel free to come by my desk and watch me work any day of the week, though. Today is part podcast, part intervention.

Essentially we're here to talk about your squat, Mr. or Mrs. Bro. And let's face it—your squat, it's ugly. The depth, your back, your ankles, your knees, it's all bad news. And to be clear, that's not all your fault. You were told you needed to back squat and squat heavy in order to consider yourself a lifter, period. You were told that glutes are the new pecs and that heavy back squats are the only way to build them. It's the king of lifts, right? And if you don't do it, then you aren't even the king of your own body.

And, you know, this isn't totally wrong. Squats are great, and they'll get you strong and add muscle and we have many, many articles on Bodybuilding.com explaining the importance of the squat movement pattern. But many lifters, perhaps most lifters, alas, aren't really ready for back squats yet, barbell back squats. Even if they'd been doing them for a long time. And this is also a message you'll find a lot of great strength coaches speaking to on Bodybuilding.com and other sites. So I wanted to present an interesting, kind of alternative approach that I found pretty fascinating from one of our contributors. A very smart strength coach and doctor of physical therapy named John Rusin. He wrote an article for us recently called "The More Gain, Less Pain Guide to Squats," and I talked with him over the phone about it recently. And we went over the back squat as a destination in your training, not really as a starting point, and laid out a plan to help get you there and get the most out of that movement once you're ready. It was a pretty interesting chat, so let's dive in.

John Rusin, welcome to *The Bodybuilding.com Podcast*.

Dr. John Rusin: Nick, man, it's awesome to be here.

Nick: Glad to have you. And you've written a half dozen or so articles for our site so far about a range of topics. Programming stuff, back pain, using great tools like the trap bar, but most recently

the topic was squat variations and squat progressions, in your article “The More Gain, Less Pain Guide to Squats.” It's a guide but it's also kind of a progression on how to kind of earn the right to kneel before the throne of the king of lifts, and how to get heavier and see your form improve, right? That's not something you usually see as somebody goes heavier... Their form actually could improve on things, and I wanted to go through this progression with you and help our listeners get the most of each step out of the way. But first let's talk about the so-called king of lifts, the barbell back squat. I see people doing some version of this movement every day in the company gym here, and they look wildly different in terms of depth, bar position, back angle, feet, all kinds of stuff. So what's wrong with the back squat as a piece of gym dogma that you must go heavy as soon as possible.

John Rusin: Well, I don't think there's anything wrong with the squat itself, you know the squat I view as one of the 6 foundational movement patterns that every single person needs to be training hard and heavy. But where we get into trouble is force-feeding specific theoretical variations of the squat. So what I mean by that is like the dogma powerlifter saying that you must barbell box squat. Or having the bodybuilder being like, “Hey, we have to high bar squat to get the quad sweep.” You know, these theories usually don't match up for people's individualization of their bodies, their needs, their orthopedic history, and really their general goal. Because a lot of us, we just want to get stronger, we want to get bigger, we want to stay healthy, and we just need to make sure that we don't pigeonhole ourselves by getting injured in the process and force-feeding the wrong types of squat.

Nick: Sure, yeah, and another piece of dogma I feel like I hear is you must back squat, and you must do it heavy in order for it to even count as lifting. Anything else is just basically an accessory movement to that lift.

John Rusin: Well, yeah, you can look at it two different ways. There's movement patterns and then there are exercises. A movement pattern is considered the big umbrella which the exercises fall under. So a squat pattern would be that umbrella and a high bar barbell back squat would be an exercise. So, not every exercise is going to fit a specific movement pattern, and for damn sure not every movement pattern is going to need to be a specific exercise.

Nick: That's a great approach.

John Rusin: So really just trying to find the variation that matches you, the individualization that you need at any given point in time for your elicited goal training response, that's the key right there.

Nick: Sure. And without giving too much away, 3 of the 4 exercises that are in your progression are types of front squats as opposed to back squats. What is it about a front-loaded squat variation that you think makes it more approachable to a wider range of lifters initially?

John Rusin: Well, it integrates the shoulder complex as being an active part of the squat pattern. So any movement pattern needs to have full-body initiation with the kind torque tension and stability output that the entire body can elicit. So, it's really inherently easy to just throw a bar on your back, lose your spinal position, lose your shoulder position, just round over like shit, and it's a lot harder to have a front-loaded barbell, dumbbell, kettlebell, whatever it is because you actually have to hold the weight actively. And that keeps you from really just falling over, falling forward and like getting into some poor squatting mechanics right off the bat. So many times we start with either a bodyweight or an anteriorly-loaded squat variation to learn what it is to stay tight and have tension and torque output throughout the shoulders that leads into something called the irradiation effect of tension

coming up and through the chain, trying to keep a stronger core position. And that's really one of the biggest common pitfalls that we see is just people losing core tension and stability, and really falling into poor positions at the spine.

Nick: Right, and as anybody who's ever tried to do heavy front squats knows, there's no escaping the tension. It's like the weight almost forces you into good position as opposed to pulling you out of it.

John Rusin: Absolutely, you look at like the anti-positions of the core. You can have anti-rotation, you can have anti-flexion and extension and side bending. Depending how you anteriorly load that, you are gonna be challenged in a position to maintain the position. And if you can't, it becomes a self-limiting exercise because, guess what, the weight's gonna fall right in front of you onto the ground.

Nick: Right.

John Rusin: As opposed to the barbell back squat, it's really hard to dump a bar if you are gonna be falling out of positions, and instead it's gonna turn into some ugly compensation patterns, and it's grinding out some nasty looking reps.

Nick: Right, heels in the air, back forward, just everything bad, right. So let's dig into this progression. It starts with the goblet squat. Now what do you like about goblet squats in particular, this is a movement that everybody's seen by now, it's definitely become far more popular, but what do you like about that movement in particular?

John Rusin: So I'll start off by saying the goblet squat isn't only like the *pussification* of all squats, like the rehab-style squat. It's something that I've personally used with Olympians. I've personally used with professional athletes and we've loaded them hard and heavy enough to the point where we can elicit a training response with that variation.

Nick: Right, you're using a seriously heavy dumbbell in this video, in the article. It's somewhere around 130 pounds right?

John Rusin: Every once in a while, when we're traveling around we can get up to about 200 in some of the gyms but the gym that we work at here, in Madison, a couple days a week, it only goes to 150 so that was kind of a limiting factor there, but ... The limiting factor also is one of the reasons that we use the goblet squat to start off with, because it becomes something that keeps down the external load on the body, but increases the RPE, the Rate of Perceived Exertion and the hardness of the actual squat pattern itself. So if you can maximize the amount of trainability that you can get from a movement by minimizing the external load on the body, that's gonna be something that is a really great recipe for long-term, pain-free training effects. And just by having to hold the weight, being able to stabilize it, it becomes something that needs to happen as a requisite, before you can squat. And that really is humbling for many people because you know guys that can squat with 4 or 5 wagon wheels on the side, on the back squat, all of a sudden get into a goblet squat and really, really struggle from the coordination standpoint. But again we use this as a teaching tool because it really quickly identifies the weak link in the kinetic chain, and that's something as a coach or as a lifter, it's all about just strengthening those weak links that you find.

Nick: Sure, sure. Now, how do you respond to that person who's skeptical initially though and says,

“Sorry this can't be a true muscle-building tool. It's just too light, it's only 150 pounds, it's only 200 pounds”?

John Rusin: So, I usually have our athletes, you know like the big meat heads that really love to push iron on the barbell, I have them go through a relative strength test with the goblet squat. And I have gotten so much shit over publishing articles about this relative strength test, that I can't even tell you. Probably the most controversial article that we've ever put out, that didn't really make a whole lot of sense to me. But what the test is, is getting half of your body weight, so if I'm a 200 pound man you're gonna get 100 pound dumbbell, you're gonna put it in your hands and you're gonna see how many pristine reps you can get without breaking with a pause. And really my strength metric to look at, is having 25 unbroken reps. And that's really something that's gonna show that somebody has mastered the squatting movement, and has a good grasp on what it is to gain tension and torque through the entire pillar, so the shoulder, the hip complex, combined with the spinal complex. And 25 reps seems like a lot, especially for the dogmatic powerlifters or bodybuilders out there that really don't hit that kind of metabolic rep scheme. But, I'll tell you definitively, that our high-end athletes, some of our high-end powerlifters, they can do 50 reps without even blinking. Like my wife, for instance, she's 102 pounds and she could do 50 reps with 50% of her body weight like ... She could do it for a ramp-up set. It's something that really just shows movement quality and mastery. And that's the kind of stuff that we're looking at to try to translate back into the back squat. You know, theoretically it's not like that's gonna be a direct transference of strength, power, endurance, or any hypertrophy. But, it's something that just shows that you have the components to actually progress and get the most out of the king of all lifts, which is barbell back squat.

Nick: Yeah, and I actually tried this just yesterday.

John Rusin: How did that go for you?

Nick: I've done a bunch of kettlebell goblet squats, not as many dumbbell goblet squats in the past. So, figuring out how to get the dumbbell into position was a little bit awkward at first. And I think up around 15, 17 reps ... It was just the pump kinda won. My motivation waned. I think I could have maybe kept going to 25 but I just sort of stopped seeing the point, in my quads anyway. But it's a serious test, I mean getting up around 20, 25 reps with any sort of load is pretty tough. But the tension, there's no hiding from that and you start to get tired in interesting places. The upper back in particular, like I definitely feel it in my upper back today. But not in a bad way, it's like things got woken up there and I feel like I did some yoga or something where it actually opened up my thoracic spine fairly significantly by the end of that.

John Rusin: But it's interesting though, so not everyone should be passing these relative strength tests. If everyone got 100% on every single test in the university, that university would not be chartered for very long.

Nick: I don't mind failing the test, I'm good at failing strength tests around here.

John Rusin: So, I hate to say pass or fail. The reason that we use this test is to derive data. So for you if your limiting factor was your quads were just burning up, guess where your focus is gonna be with your lower-body strength and hypertrophy work, it's gonna be the freaking quads. If you can't hold the weight, that's a question that I get a lot, guess what, you're upper back tension, tightness and stability, that's your weakest link. Go hammer it in your programming. We are just trying to

objectify some the stuff that is so subjective unless you go through a standardized test.

Nick: Sure, so how do you program this? Is it the centerpiece of a lower-body day for somebody? Just goblet squats next to the dumbbell rack?

John Rusin: It could be. For some of our in-season, high-end athletes, the guys that are making a couple million dollars on the field on Sundays, this can be a very nice pain-free squat variation that they can use 1 to 2 times a week, they can load into the strength or hypertrophy set and rep range, and they can minimize the amount of joint stress and central nervous system stress that they're putting through their system. But many times, this is just a progression, so we get in, we master it and we keep on going up the chain. The goal is never to have to goblet squat, like in rehab purgatory for the rest your life.

Nick: Rehab purgatory, okay.

John Rusin: Rehab purgatory is what we need to stay away from. So anytime that we're using these variations, it's just that, it's a variation that we can add some novelty to a training effect from. But the ultimate goal is just to improve enough so we can keep on working up that pyramid, which is squat variation with the barbell back squat being at the top of the epitome of movement.

Nick: Okay, so let's talk about the next step on that progression which is the landmine. This is a movement I've seen recommended for a long time, the landmine squat, and I never really bothered with it until just recently. Because it seemed kind of redundant of the goblet squat. I've done the RKC certification, and I thought, oh goblet squats are the best front-loaded squats without a barbell, but then I tried this and I have to say I'm completely sold on it. The reason being it's just ... I felt like I held rock-solid squat form deeper on that particular variation than any other squat variation I've tried. No butt wink, even at the very bottom was kind of surprising. So, how did you encounter the landmine, what's your history with that and what made you include that in your progression?

John Rusin: I mean the landmine is nothing new. As my friend Christian Thibaudeau said ... He was talking about this shit back in 2002.

Nick: Right.

John Rusin: So, we added a band to it, we started using it in rehab, and we started using it in sports performance a little bit more prominently. But again, you know, as with anything in the industry, it's not anything new, it's just new ways to apply it in a strength conditioning style.

Nick: Right, and when you see it on your Instagram feed, it feels new every morning, right?

John Rusin: It does, yeah. People ... It's gonna be new to somebody who's never seen it before, so kinda taking that with a grain of salt. But when you look at the landmine goblet squat, it's not a progression or a regression, it’s kind of on point with the goblet squat, based on your goals. So, it could be a progression for somebody because all of a sudden, you have the ability to load much heavier.

Nick: Right.

John Rusin: So you can get multiple 45 pound plates on that barbell and you can be grooving a

squat pattern that looks really good, and you can be exploding up against that external load because of the strength curve that the barbell on its one side creates. So you can be a little bit more dynamic about it. The video you're referring to on Instagram that I showed a couple weeks ago was, I banded it down. I had it in position and I was going through I think it was sets of 6 or sets of 8, with explosive-based landmine goblet squats as a secondary hypertrophy day. So that was like the more key lift that had a little more bar velocity behind it. But, for people that truly struggle with the squat pattern, if you can't goblet squat with a dumbbell or a kettlebell, most likely you're not really tapping into the potential of your posterior chain, so the integration of the glutes and the hamstrings stabilizing the back side of the squat. In our society, we are so anterior-chain dominant. Right now I'm sitting slouched over, I got my hip flexors tightened up, and then my spine's flying forward. And then when I go to squat, guess what, that's gonna be something that's gonna probably show up in the squat pattern as well. So, just because of the physics of the landmine position, it forces you back into your hips more. So like you were saying, you got deeper than you have ever before, and all of a sudden you didn't have that butt wink and you didn't have that lower lumbar flexion that's so notorious with painful squats. The reason being is that it forces you back into the position because as the bar lowers closer to parallel with the ground, the bar's actually coming closer to you, forcing you back. So that can be a really big advantage. In another way that it could be a huge advantage, is that you have something to hang on to that has a contact point with the ground. So, that from a stability standpoint, is very advantageous for somebody that truly just doesn't have the coordination, the balance, the stability in a goblet squat or a barbell back squat right off the bat. So, it can really be a good relearning tool. And again, any time that we're using this, the goal is to get a training response, maybe to groove the squat a little bit better, and then to move on again. So we don't wanna get stuck with this variation. But it is a go-to variation. Secondary squat training sessions in the week, or just trying to keep down the external load or not trying to fry the CNS.

Nick: Sure, and one other thing that I found was interesting about it, was after I did a set. I just kind of sank down into a bodyweight squat as kind of an assessment to see, okay what did this actually do for my bodyweight squat. And I felt like it was the best bodyweight squat I've had in ages. I could just hang out so comfortably at the bottom with no curvature really. And that, to me, was also a sign like, yeah, okay this is something that definitely belongs in the mix if it ingrains a squat pattern so well that you can actually pass an assessment that maybe you would not be able to otherwise, afterwards, like immediately afterwards.

John Rusin: That's such a great point, because many times when we do use this variation with people, and it can be said for the dumbbell goblet squat as well. It's placing you in a position that you relearn how to use proper stability patterns. Our industry loves to say that, hey if you can't squat deep, it's your freaking mobility. “Oh, it's your mobility, it's your flexibility.” It's not. 8 out of 10 times, you are not gonna have better results if you're more flexible or more mobile. So, you're gonna have better results if you can have greater proximal stiffness through the shoulders, the hips, and the core, that yields better, smoother, more authentic movement happen distally into the extremities, whatever the moving part is. So, that's one that's easy. I almost group it as a mobility, quote on quote drill, because it yields so much better of a movement pattern. It's something that -

Nick: Right that's what I've been using it for. I've been down there every day in the gym now using it a little bit for just ... Yeah, getting that squat pattern going every day.

John Rusin: And it's something that you could even use for a primer before your big squats. Just getting the groove going and then moving into the rack to get your real work done.

Nick: So now you offered a standard in the goblet squat to aim for, this half body weight for 25 reps, is there a standard to aim for for something like the landmine squat before you say, all right, let's try something else?

John Rusin: We don't use a standard with that one, because the way that you load it is gonna be very similar to any other big compound barbell movement pattern. So it really becomes individual-dependent on that.

Nick: Okay, okay. So then, the next stop though on this progression is the barbell front squat, which now we're in the rack. We're not standing out on the gym floor anymore. This isn't really an exotic movement as much as the previous 2, even though they aren't exotic but you don't see as many people doing them. But let's say that you build up to this movement after spending weeks focusing on the other 2, how will you find it's different than if you just dive in and start doing front squats?

John Rusin: So, if it's done properly, if you truly earn the right to step up this pyramid, step by step, you should be able to go in and implement the next step up very, very seamlessly. So, just right off the bat if you're having huge amounts of trouble as soon as you get into like a front rack position, most likely it's actually the positioning of the barbell that's giving you the trouble, it's not the movement pattern itself. It's not the exercise itself. And something I touched upon in the article, was many people just don't have the shoulder and upper back stiffness capabilities of holding a bar in a front rack position that's essentially in your fingertips, while it sits on the front side of your shoulders and your clavicle. And that's okay, because unless you're going to the freaking CrossFit games and you're gonna be competing on ESPN, nobody gives a shit if you can front rack a barbell. We're looking at eliciting a training response, we're trying to get bigger, faster, stronger, more resilient to injury, and if you have to use straps in the variation that I showed, like so be it. That's a variation that I've personally used for the last 12 years with very, very good success. And it's many that, if it matches up with your goals that is non-Olympic lifting, non-CrossFitting, that's really a go-to setup because all of a sudden, that limitation that you have getting into that front rack position, you can nullify it and make sure that the limiting factor is not your shoulder position for a squat. Which really doesn't add up when you kinda step back and look at the effectiveness of a movement.

Nick: Sure and the variation you're talking about, if it isn't clear to somebody who's listening, basically you take a couple of lifting straps, wrap them around the bar and you hold on to the straps, rather than holding onto the bar. And I have to say I love that particular variation, not only because, yeah, it makes mobility not a limitation, but also you get to pull up really actively on those straps. I feel like it almost helps you get into better position because you have no choice but to pull up on them.

John Rusin: Yeah, it absolutely does. And just to make sure that everyone's clear on this, because we get a lot of questions, you are not putting the lifting straps on your wrist and then connecting them to the bar. You are literally taking them so they're long, they're not strapped up yet, putting them, 2 of them, on the bar right where the knurling meets the smooth, and you are literally gripping the straps with your hands over the barbell, with your elbows in alignment with your shoulders and your wrists. Just to be clear on that one, because every once in a while we'll post videos about that and you can't quite see how I'm set up, and then the next day I'll be tagged in a gazillion Instagram videos of people strapped with their wrists to the bar. It's an ugly, ugly position. But really trying to make sure that the shoulders stay active, that's something that when we talk about building resilience, building sound posturing, that's one of the best things that we can do. Having a barbell on the front side of your body, it creates a more erect torso position. So, instead of being like, your

chest parallel to the ground, it's gonna bring you more up into a more perpendicular position. And that really helps, again, people to sit back into the squat a little bit more, to use the quads, the glutes, the hamstrings effectively and just get into a better pattern that doesn't involve deep spinal flexion and posterior pelvic tilting or butt winking.

Nick: Sure, sure now the front squat is also the first variation where you see people using an addition to whatever lifting straps or other accessories like that. You seem them start putting on a belt, putting on their squat shoes, putting plates beneath their heels and starting to gear up a little bit for something like that. What do you think of those approaches to the barbell front squat, or those additions to it? And shoes.

John Rusin: I'll start with lifting shoes. Whenever possible I like to keep people in a flat shoe, a minimalist shoe, a Chuck Taylor is a good one, because we do not want to create internal or external crutches on our body. So you essentially look at a lifting shoe because of the height of the heel, it changes your relationship with the ground and it almost pushes your body forward. Sure that can be good from a competitive standpoint, it can add a couple extra kilos to the bar, again if you're an Olympic lifter, they are called Olympic lifting shoes for a reason. But, if you have to depend on them even to squat without any resemblance of pain, that's not a good thing. It's usually just a crutch that you're gonna be crutching around on for the rest of your training career.

Nick: Sure.

John Rusin: So I try to get people as raw as possible. If you are moving into a pure power or strength range in your sets and your loading is heavy, I have absolutely no problem using your working sets with a belt. That is totally cool, because that becomes an enhancement of the squat. You can move more load because your bracing strategies are enhanced by using that tool. And then the other slippery slope is going to be using wraps. For the general fitness public, you need to make sure that your risk reward always matches up with every single exercise that you do. So, as wrapping your knees like your about to go squat 1000 pounds at the Arnold your goal? Or is just to elicit X, Y or Z response to make your life better. So trying to minimize the amount of external crutches that you have is really big, but I guess the lifting belt is a question that I get all the time too, because every video that we post, every article that I post that I have a belt on if I'm doing a 1 to 6 RM on a working set, I always get the question, will that detrain your abs? Will your abs stop working? Not if you do it correctly. If you're strapping on the belt in hopes that 5 herniated disks aren't gonna happen and you have no resemblance of core stiffness without the belt, that's not a good thing. But if you're a seasoned lifter, you know how to squat, you know what proper tension and stability feels like because you probably should've earned the right to do it with the goblet squat variation. Then, you use the belt to just get a little bit more out of your sets and that's totally fine.

Nick: Okay, so what about this person who puts the belt on in the locker room, doesn't take it off. I saw a guy straight up at the urinal wearing his belt the other day. I didn't ask him if he was bracing against it while he was taking a leak necessarily, but that's something that you see in a commercial gym a lot. This guy, he walks out of the locker room wearing the belt, and it's on the entire time basically on the treadmill.

John Rusin: Yeah so, I try to limit it to working sets of squat and hip hinge patterns, so a.k.a. any squat variation that you're doing heavy or any deadlift variation that you're doing heavy. If you have to use it for bicep curls, you're not doing something right. You know, if you're on the lat pulldown, just flailing around with your belt on, that's not exactly what we're going for. So that -

Nick: What if your belt looks really cool though? It has your name on it -

John Rusin: It doesn't look cool, I mean it's part of meat head wardrobe, right? You got your cutoffs, your Zubaz and then freaking belt over it. Yeah, don't be that guy.

Nick: Okay, do not be that guy, people. Do you have a standard that you like to aim for for the front squat, like all right you need to hit bodyweight for 10 or bodyweight and a half for 10.

John Rusin: It depends how we load it. It's not as strict as some of those relative strength tests that we do with the goblet squat, because it's something that we do use as an indicator lift for strength/power hypertrophy. It's something that we wanna see some serious progression on in terms of your strength and your performance on that lift. And this alone can be a terminal squat lift if it matches up with your goals and your body type. So, for some people, they're just not gonna tolerate the barbell back squat well, and guess what they don't have to. They can get a great training response through the entire body with the front squat. So all of a sudden this becomes our marquee lift. And this is something that from a long-term progression standpoint, we want to be making steps forward, little by little in every single training block that you're doing.

Nick: Yeah, we had a big program come out a couple years ago with one of our big famous athletes and it was the marquee lift. It was a front squat, there was maybe 1 and a half rep front squats, and I remember there were some comments where people were saying, this is not bodybuilding, this is CrossFit. You guys are training like phony athletes doing all these front squats instead of back squats now. But I like ... I hear an increasing number of people saying that these days. The front squat is just, it's a better place to stop for a lot of people, especially if they're going to go do back squats, they do find themselves dependent on ... I need lifting shoes in order to get any real depth or any good form on the back squat.

John Rusin: Yeah, if it matches up with your goals, any squat variation can do the job. It's usually not the theoretical thing that you're reading all the articles about that is gonna work for you. It's the thing that when you get in and you actually test it out yourself, a subject line of N equals 1, it feels the best, you're able to train it, you're able to elicit a mind-muscle connection. That's the kind of stuff that you wanna stick with. And it doesn't matter what everything else says, if you can identify that this is your go-to, so be it, because your goals are gonna be highly, highly more yielded with that kind of approach.

Nick: Now, one thing people do like about back squats, though, is that you can put it on your back and you can do a really high-rep set, you know 20 rep sets and all those famous bodybuilding protocols. Do you find that the barbell front squat lends itself to that or is the tension just so extreme that up around 15, 20 reps is just no good anymore?

John Rusin: So, people curse out my name that train with me on my functional hypertrophy training program, because in one of the first phases we have the secondary lower-body hypertrophy day, the marquee lift is 5 sets of 12 front squats. That doesn't look like much on paper, but then when you get through that second set, you're like holy fuck. It's a whole body response because of what we were talking about before. It lends itself to having to have shoulder stability, core stability. There's not faking a front squat because if you can't hold it, you can't hold it, and you're gonna drop the weight. But, I think the barbell back squat does lend itself a little bit better to the high-end rep schemes, in hypertrophy or even like a metabolic set. But I still don't usually try to program that any more than a

12 RM. Really the limiting factor becomes how stiff can you stay throughout the pillar. And we were kinda talking about this off air, if you lose your stiffness and all of a sudden you turn an authentic squat pattern that's targeting contractile musculature into a compensated squat pattern that just turns into ugly reps, you're flexing your spine over, you're losing stability, and you're using non-contractile structures a.k.a. the joints, the ligaments, the vertebral disks, all that stuff. That's something that you wanna stay away from because the end risk to that is just so much higher in conjunction with you not eliciting a very good training response off of it either, because all of a sudden the emphasis is taken away from the musculature and put on the non-contractile joints. So, as soon as you lose tension, as soon as we lose the ability to really do good, pristine reps with tempo and form and technique, that's when a set should end for me. And for most people, it ends around 6 to 8 reps, some super endurance studs on the barbell can get up to 12 to 15, but I've seen far and few people between that can go over 15 with really pristine types of stability at their spine.

Nick: That's good to remember. And speaking of that whole body response to front squats I will say nothing in the world makes me hungry like front squats does. It just ... Hearing that 5 sets of 12, I'm hungry just listening to those numbers. Do you find that people ... Does that come back to you through the media channel, social media channels when people are doing your program, like “I've never been this hungry before?”

John Rusin: Oh yeah, I mean you can think about it because you're just using more energy to stabilize a weight because everything's more active. The best lifters in the world, the strongest, the biggest lifters in the world, they know how to use every single ounce of tension in their body to get X amount of weight on the bar or to grow a muscle X amount of size. It's when we get in trouble when we think it's just isolation. Squat is just for the legs, right? Oh, a front squat's just for the quads; it's not. We're training our full body all the time and the quicker that people kinda conceptualize that, the more their lifts go up, the bigger they get, the leaner they get because they're actually eliciting a stronger training response from it.

Nick: That always ... Front squats have ... For the quads thing always seem simplistic to me anyway. I mean, I know so many people who say that their ass is sore after they do front squats, and to me that just says they're doing better squats anyway.

John Rusin: Exactly.

Nick: Okay, so stop 4 on the progression is the back squat, but it's not just any old back squat. You recommend a box squat with band resistance. Now first of all, what do you like about the box, what do you feel like the box adds to the equation?

John Rusin: For the average lifter, they feel very vulnerable at the bottom range of motion of the squat. It's the range of motion that they're gonna be likely to kind of either round over or they're not gonna go deep enough. So it's like this no man's land of squat depth. Written many, many articles about, theoretically, where people should be able to get in terms of their distance from ass to ground, but really it depends on the person's hip structure, their spinal structure, their skill level with the movement. There's just so many variables that are in play. So by putting the bar on your back, for the first time if you are going up into this progression, we want to take the apprehension out of the movement, and we do that by simply supporting the bottom range of motion with the box. So, people get a bad misconception with this because they think it's like, you sit down, like you're sitting down on the fucking sofa ready to watch a ‘24’ marathon or something. You don't, it's still active. So you are literally going down with as much tension as you can possible go down with, and sit on the

box. And we try to say that you de-load 50% of your bodyweight into the box. But you are staying highly active when your ass is in contact with that box. There's gonna be the slightest of rock-backs and then it's gonna be an explosive base movement up. So this has the advantage of not only of stabilizing the bottom portion of the squat, but it's actually a form of plyometric or a kinetic energy accumulation training that not a lot of people realize. Because as soon as your ass makes contact with that box, we store a lot of kinetic energy in our system for about 1 to 3 seconds. And that can make it a more powerful squat out of the bottom position that is gonna also be more stable. So that's a variation that I love to use with people, going one step further with that. I also love using accommodating resistance in band form because again we're de-loading that most vulnerable position of the squat, but we're also teaching our lifters to be more explosive, to be stiffer off that box, because we can accelerate the bar into a more terminal end range of motion at the top of the lift. So if you think about just not having bands or chains or any of that stuff on the bar, naturally you have to decelerate the bar so it doesn't fly up off your back and you don't lose stability at the top before you get it back into the rack. By adding accommodating resistances, you can learn how to accelerate the bar under tension and stability a little bit more and that's gonna be something that translates back into your free squats when you do program those in.

Nick: Yeah, and I imagine there's definitely a grind then at the top half of that, but you're grinding through the safest and strongest part of the range of motion as opposed to the most vulnerable.

John Rusin: Exactly. Exactly.

Nick: So how ... Oh go ahead -

John Rusin: The other thing I should say about bands, just from a corrective standpoint, it could be used on front squat, it could be used on back squat, it could be used on the landmine goblet squat, but the ability to use bands also helps to stabilize a squat pattern. Because again, you think about contact with the ground, so the band are grounded, and they are in contact with the barbell, your body's in contact with the barbell. Therefore you have more ground contact as compared to something where you only have your feet on the ground. So it does help people create stiffness through the shoulders, the hips and the core functioning as a unit together. And that's something that even with the tiniest pro-mini band on each side of the barbell, I've seen lifters be able to banded squat heavier than they were without the bands, which makes no sense -

Nick: That's fascinating.

John Rusin: Yeah, it makes no sense when you try to add up the physics. But when you add up the neurology of being stiffer, and having a smoother more explosive squat, it makes perfect sense. So even the tiniest of bands can do really, really well for cleaning up movement patterns.

Nick: So this isn't something that's just for powerlifters then, I see somebody saying, Oh God, I'd be so self-conscious putting these on the bar acting like a badass in the gym when normally it's just this guy who's the powerlifter in the gym who would be attaching bands to the bar.

John Rusin: Yeah, that's one of the biggest gripes that powerlifting coaches have with the bands, the ones that don't use the dynamic effort and method, is that it's almost a stability, they call it the Smith machine. They try to say that banded squats' like a Smith machine because of the ground contacts. But I think if you do it the right way, it's just getting that stimulus so your system feels how it's supposed to feel when you're doing a movement pattern, and then you can go again and

translate that into whatever you wanna do with your lifts.

Nick: I noticed in the video that you have a step and then a few plates stacked up on top of the step. How do you go about finding your ideal box height?

John Rusin: This is an easy one. So whatever depth you can get to with a neutral-ish spinal position. So I say neutral-ish, because you're not gonna have always the most pristine straight spine where there's absolutely no movement happening from it. We're not after perfection here, we're after good enough. If you fall away from good enough and it turns into pure shit, that's when we get in trouble with chronic or traumatic-base injuries. So, I have people sit ... Most people are gonna be around 10 degrees above or below parallel. If you look at your upper leg, your femur bone, and the hip crease when you get down into that lower squat pattern. So, you can get around there, but there's no harm in going 20, 30 degrees above parallel, if that's what you can keep a spinal-neutral position at. Because again we're just trying to minimize the unwanted movement happening at the pelvis, the lumbar spine and the entire spine as a unit and we're trying to maximize the amount of trainability that we can get through the active tissues.

Nick: The way you talk about it, it kind of reminds me of a rack pull. When I think about good enough versus complete shit, you look at somebody's rack pull they have a beautiful rack pull from the knee, but then what's they're picking up a barbell from an arbitrary height, determined by Olympic lifting off of the floor, everything goes to complete shit. Do you think that these 2 movements have a certain resonance in that way?

John Rusin: Yeah, you could say it for any movement, not just the deadlift or the squat, but every single movement you have your authentic movement capabilities, and then you have your compensatory movement capabilities. You want to stay within authentic so you can get a better training effect, and you can make that training pain-free for the long-term. That's really the goal, is trying to ingrain these movement patterns, trying to crush your muscles and you want to spare the joints in the process. If you can do that, if you can leave the gym every single day saying that, hey I didn't crush my joints today and my muscles got pumped to fuck, that is gonna be a victory. That's gonna be something that you're gonna have longevity with, and that's gonna be something that allows you to progress years and decades instead of pigeonholing yourself into an injury after 6 weeks.

Nick: Yeah, and one more question along those lines. We've had a number of different articles from different strength coaches over the last 6 months or so addressing the idea of how low should the normal person go, not in squat depth but in terms of reps. Someone said there's really no reason for anybody who's not a powerlifter to go below a solid triple or a solid 4. How low should somebody go on the back squat if they are just that person that says, “You know what, I'm a person I'm not a crazy athlete I'm just looking to get stronger, bigger, more capable?”

John Rusin: General preparedness, general fitness population, I don't see a whole lot of reason ever to go under a 3 RM. In our key programs that I put out to the masses, we have eights, fives and threes. 3 is as heavy as we get on the big compound movements for that exact reason. As soon as you get under a 3 RM, really in any compound movement, it becomes more neurological than it does mechanical. And the average person is after a mechanical response to training, a.k.a. something that can elicit a response for hypertrophy making the tissues bigger or stronger mechanically by actually making the tissues bigger. As opposed to how well did you execute that 1 RM today. It could be 20% up or it could be 20% down based off of your execution, your CNS and your neurological

makeup on that given set. So, when we do ... I have been playing around with 1 and 2 RM's for some general fitness population, but we are under-load them. So we sub-maximally load and we try to use those as like one last set where people can explode a fast rep and they can just get used to having just like 5, 10, 20 more pounds on the bar. And that just opens up their minds, they're like hey I have some more potential here. But it's more of a mind fuck then it actually is eliciting a better training response.

Nick: Right, so it's not a battle for their life necessarily.

John Rusin: Yeah no grinding reps there. But I would say for 99% of the people staying between the 3 and 8 range, that's gonna be where the money's made.

Nick: And as people start to move down sometimes in those rep ranges they can also get completely obsessed with accessory work, like adding more and more accessory movements. Do you feel like, with a progression like this, does it require much in terms of accessory moves or is it more about getting the most out of each of these possible moves, getting everything you can out of the move itself.

John Rusin: Well, there's a big difference between having glaring weak links, having like a deficit that is literally just limiting your external load on the bar to the point where you've been plateaued for 6 months to a year. And you just go in little by little and getting stronger. If you have these glaring red flags, that's a reason for accessory work. But many times I see for general fitness population, it's not the red flags that are like, “Hey, man, this 1-to-2 inch portion of your squat is super weak there, we need to glute ham raise to fix that.”

Nick: Right.

John Rusin: It's more so of just fixing the movement patterns itself. People have low-hanging fruit out there that they're just not picking, in terms of just fixing movement. Just making the movement pattern better. I have this conversation all the time with my colleagues, is that we spend decades trying to squat perfectly, and it's always the ongoing chase. So for somebody with general fitness goals, it's gonna be a very low-hanging fruit that if you can even just make 1 or 2 smart adjustments to your movement patterns, it's gonna give you so much more of a benefit from your training because again you're gonna maximize the trainability of movements and you're gonna minimize the stuff that's probably flaring you up and leaving you with chronic aches and pains.

Nick: That's a great perspective to end on, I feel like ... Thanks for talking with us and tell us where we can find you online and also you said that these are in a program that you sell through your website, right, these particular movements?

John Rusin: Yeah, absolutely. You guys can find me at drjohnrusin.com and a lot of the programs that I've written articles for Bodybuilding.com on and a lot of the articles on our website, the methods are all put in to one single-cell program that's a 12-week functional hypertrophy training program that the goal is to achieve the holy grail of training to get strong, get ripped, but stay resilient to injury, especially if you have that in your past.

Nick: Right.

John Rusin: So I'd highly recommend that.

Nick Collias: Great, and I highly recommend following John on Instagram as well. I feel like there's something solid there every day just for ... Something you didn't quite think of, one of those things that you can share with somebody and say this is just a really interesting way to approach this particular movement. So I totally recommend that and we'll include links to your articles and social media on the page with the podcast. So, John Rusin, thanks for talking to us, thanks very much.

Dr. John Rusin: Perfect. Thank you so much.

THE MORE GAIN, LESS PAIN GUIDE TO SQUATS

If you wince at the mere mention of the back squat, you're not necessarily banished to the machines forever. Do these intelligent squat variations instead for pain-free progress in your lower-body training!