

Dr. Bret Contreras: How to Build Bigger Glutes & Legs

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Dr. Andy Galpin

The science and practice of enhancing human performance for sport, play, and life. Welcome to Perform.

Dr. Andy Galpin

I'm Dr. Andy Galpin. I'm a professor and scientist and the executive director of the Human Performance Center at Parker University. Today's guest is Dr. Bret Contreras. Bret has a PhD in sports science, a master's degree in exercise science, and is a certified strength and conditioning coach. Bret is known popularly as "The Glute Guy," and that's because he spent the last 30 years of his career focusing on the science and application of maximizing muscle growth and strength development in the lower body, and specifically the glute or butt muscles. We'll talk about that a lot today. You'll learn a tremendous amount about how to optimize training for the glutes, but we'll talk about much more than that. You're going to learn a lot about anatomy, physiology, biomechanics, and other things as they apply to practical recommendations. Bret does a phenomenal job, and has over his career, of weaving these things into conversations, not so that you learn unneeded or unnecessary mathematic principles, but so that you can really maximize your understanding of why certain exercises do certain things and others do not.

Dr. Andy Galpin

This is going to allow you to leave this conversation, whether you're coaching people or just here for your own personal needs, having a much better understanding of how to choose the exact right exercise based upon what you're trying to get, and what you're not trying to get. So Bret has spent a lot of career on people who are training that want specific development in a particular part of their lower body and not in others. You'll learn a lot about how to do that. You'll also learn about how to make sure that that exercise is doing the right thing for you personally that you're wanting it to do. So you're going to have a lot of fun. You'll take a lot away from this. I hope you can extend these learnings, again, from just females to men as well, from just the lower body to the upper body as well. And so overall, you can enhance the precision, accuracy, and effectiveness of your training and fitness routines, specifically regarding developing strength and muscle size in the lower body.

Dr. Andy Galpin

That all said, please enjoy my conversation today with Dr. Bret Contreras. Dr. Bret Contreras,

thank you so much for being here.

Dr. Bret Contreras

Thank you for having me.

Dr. Andy Galpin

The world knows you, for the most part, as The Glute Guy, and we will certainly talk about the glutes today, but I know you as the guy who used to write extensive articles on the science of strength training, mechanics. I don't know how many of those things you wrote and I read many years ago before social media existed, but it's very funny for me to hear people talk about you and then my perception of you is like, "This is the science guy. This is not the glute guy. This is the deep, passionate love for science guy." So I don't know where our conversation is going to go today, but I certainly know we will definitely talk about the glutes and how to train and why and all those things like that. But I'm personally a little bit more interested in the other science stuff. So, that is a little bit of my lead-in. I don't know how you view all that stuff, but that's my perception of Dr. Bret Contreras.

Dr. Bret Contreras

Appreciate that.

Dr. Andy Galpin

To get us started, we're going to play the hits. We'll talk about the glutes and all that, but what I was really hoping to go into very first is you made a post fairly recently that I thought was really insightful. And actually, I've changed how I do stuff now permanently because of a single post that you made. And that was referring to the difference in how to train women versus men. Now, my answer, which I've changed my tune on typically is, because I've trained a lot of female athletes, is there's not that many things that are different. But you actually gave some incredible insights into things that are different and how you do differently and someone who's trained, I don't know, 80% of your clients over your career have been female? More? I don't know what's a fair number there.

Dr. Bret Contreras

Probably 90.

Dr. Andy Galpin

90-plus percent. What are, off the top of your head, some of the major differences in coaching females? And I'll give you context for you. We're talking about strength training or strength training-related activities, not endurance running and all things like that. So within this wheelhouse, how do you think about this?

Dr. Bret Contreras

It's just mainly their goals. And so men can't seem to wrap their head around it. Like-

Dr. Andy Galpin

It's funny you say that because this was literally me.

Dr. Bret Contreras

Yeah. It's most men. Because we want hypertrophy everywhere. If you were like, "Hey, Andy, you mind if I slap a little muscle on your traps?" You'd be like, "I'll take it."

Dr. Andy Galpin

I'd be stoked.

Dr. Bret Contreras

Each delt head? Sure. Bis, tris? Sure. Pecs? Upper, lower? Yep. Lat?

Dr. Andy Galpin

You can't name a muscle right now-

Dr. Bret Contreras

Right

Dr. Andy Galpin

... that I'm not going to say yes to. Like, all of them.

Dr. Bret Contreras

You'd say yes to everything. We want to grow everything. And so therefore, when we do our leg days with squats and deadlifts and lunges, that tends to grow a lot of quad and glutes. But here's the deal. A lot of women, if they lean out, if they get lean, they like the way they look. They might want a little bit more quad and that. Not too much, but they want a lot more glute. That's the goal is to have large glutes. In fact, now surgeries are becoming very common because of that, because it's hard to get glutes through training. Even through proper training, some don't get the glute mass they desire. So women want glutes, okay? Say a man wanted arms as bad as women want glutes. We said, "Look, we want you to get..." Say I'm a man. I want the biggest arms possible. You wouldn't go, "Andy, quit doing isolation lifts." And just-

Dr. Andy Galpin

Free weights only

Dr. Bret Contreras

Free weights only-

Dr. Andy Galpin

Do the big complex movements

Dr. Bret Contreras

... and just do... You know you're going to get big triceps if you develop a strong bench-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... and weighted dips and close grip bench, and you know you're going to get big biceps if you do weighted chin-ups and pull-downs, supinated pull-downs. Right. Every guy knows that if I said, "I will give you a million bucks if you put two inches on your arms in the next six months," what would every guy do? They'd start training at least three days a week. You'd throw what you know out. You wouldn't go, "Oh, train a muscle one day a week." You'd say, "No, I'm going to train it at least-

Dr. Andy Galpin

I don't care what their studies say. Yeah

Dr. Bret Contreras

... you might start, you might even venture into training it every day. You might be like, "I think I can do some curls every day." And you'd use variety. But you'd be going, "I'm going to get as strong as possible at close grip bench and weighted dips. I'm going to get my weighted chin up," but that's going to make up maybe a third of your volume. Two-thirds are going to be curls and tricep extensions. Now, use that exact same strategy for women with the glutes. Yes, they're going to do the squats, they're going to do their lunges, they're going to do their Romanian deadlifts, Bulgarian step-ups, et cetera, and they're going to try to get strong at those. But if that's all you did, you're leaving a lot on the table. Your maximum recoverable volume for glutes is probably 36 to 45 sets a week, if you split it up properly. But here's the deal. Because if you said, "Andy, you're only allowed to do breathing squats, one set to failure," like-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... where you're you grind it out. You can do squats to failure, deadlifts to failure, and walking barbell lunges to complete failure. How many sets could we squeeze in a week-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... and recover from it still?

Dr. Bret Contreras

Maybe 10 sets a week, tops-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... like where you're to failure.

Dr. Andy Galpin

Especially when you're not 22 years old-

Dr. Bret Contreras

Yes

Dr. Andy Galpin

... and on potentially recovery aids.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

It's going to be tough.

Dr. Bret Contreras

Yeah. No PEDs-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... and you're not 18 years old anymore. Okay, so you're going to do that still. You're going to still do your compound list. But then you think hip thrusts. If all you did was barbell hip thrusts, you could easily do them every other day. They don't beat you up much. They work your short muscle lengths, and people will say, "Well, they don't grow. They work you at short muscle lengths. They're not as effective." Hold on now. We got three studies now. We have the Plotkin 2023, we have Casiano 2023, and now we have Bartolomeu 2024, all indicating that they're just as effective as stretch position movements, okay? So the jury's out on glutes.

Dr. Andy Galpin

More muscle growth on glutes.

Dr. Bret Contreras

For glute growth.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

So the jury's still out. We need more specific research, but it seems like they're just as effective, so if they don't beat you up as much and you can do more volume, why not add those in? The other thing is, it's like delts. How much delt volume could you handle per week? It's a different-

Dr. Andy Galpin

Sure

Dr. Bret Contreras

... thing when there's different subdivisions. Like, yes, so every set of bench, incline, military, dips that you do is front delt, and if you're in the frontal plane, it's side delt, too. People think military press, especially behind-the-neck press, activates the lateral delts very well. But, and technically, every pull-down and row you do works the rear delts, but I know personally, I grow my rear delts way better when I perform specific movements for them.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And it's noticeable. So anyway, yes, you got all your compound lists, but you could throw in, if all you were trying to do was grow your delts, you could probably do some isolation work for all three heads every other day. Now, with the glutes, women want the shelf. They want their upper glutes, too. Well, so there's the glute medius.

Dr. Bret Contreras

Glute medius and minimus is a separate muscle. So that's separate volume. But also, there's some evidence about, with regards to the upper and lower gluteus maximus, we need more research because the only training study was Plotkin, and it showed the same upper and lower glute growth versus between vertical and horizontal. But we have some EMG evidence, like when you put bands around your knees and do hip thrusts, it tends to activate the upper glute max, not the glute medius, by the way, because women will do it for the glute medius-

Dr. Andy Galpin

Mm-hmm

Dr. Bret Contreras

... and it doesn't activate the glute medius more.

Dr. Andy Galpin

No.

Dr. Bret Contreras

It activates the glute medius less, but it activates the upper glute max more, but not the lower glute max more. We're lacking a lot of research. But my point is, you can do a lot of volume if your main goal is glutes. So quit thinking about bro splits. Quit thinking about, a man decided one day, "Look at the human body. Look at it, imagine on an anatomy chart, okay? I'm going to split this upper half into five different days. I'm going to split this lower half into just one day for everything."

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Now, you see some bodybuilders over the years who did do, break their lower body into a quad focus and a hamstring focus. But bodybuilding is not about, male bodybuilding is not about glute development now.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

And so most of the male bodybuilders, if you do steroids and train your legs, you end up with fine glute development. And then it's about getting shredded glutes. That's diet and-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... conditioning. So they don't train for maximum glute hypertrophy. If they did, they would have separate glute days, and so they don't care about that. The women care about that. And then male, some men care about maximizing glute size, like me, a guy who never had any glutes.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

That's why I became the glute guy. I had to study my butt off to grow them, because I'm like, "I'm doing these exercises. I don't feel them working my glutes as well as I should." So that's the main difference with women. Glute development is their number one goal, so they're going to train glutes three days a week. Most of them.

Dr. Andy Galpin

Okay. You threw out so much gold right there. We're going to take a very long time unwinding and packing a lot of the things. There's a lot of terminology in there that I followed along with it,

probably missed some people, though. I want to make sure everything you just said, people can grasp how helpful and important that was. So we're probably going to spend a large chunk of the next few minutes here going back through some of those things. But To summarize the initial question, again, the context I laid out for you was women. This is the strength training side of the equation. This isn't mobility, this isn't necessarily body composition or fat loss or endurance. This is simply if women want to lift weights and men want to lift weights, what are some of the things we should think about that differentiates them? And the case you made pretty eloquently there is oftentimes, certainly not every woman-

Dr. Bret Contreras

I want to stop you real quick. This is important. I want to give some shout-out, some credit. You said, "This is about hypertrophy mainly."

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

"This isn't about athleticism." But I would've never came up with these methods that I've popularized if it weren't for my strength coaching background.

Dr. Andy Galpin

We're going to get into that here right now.

Dr. Bret Contreras

And getting submerged into that world.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

But they were doing three lower body workouts a week and recovering from them. I'm going, "Bodybuilders tell you to train legs one day a week." And I'm like, "They're doing a knee-dominant movement and a hinging movement every training session, and then they're doing glute activation work." And I'm like, "Why do you have to do glute activation work?" Well, you have to wake up the glutes in all three planes. Why can't we turn those into strengthening movements? Why are we using little bands and doing 10 glute bridges? Let's load those suckers up. That's what gave me the idea. So anyway-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... it's interesting that I came up with my ideas of hypertrophy because of the strength coaching world, but keep going.

Dr. Andy Galpin

Yes. Okay. So the summary for training men versus women, in this case, what you're honing in on is the fact that we don't necessarily, on aggregate, as a general statement, not every woman, not every man, right?

Dr. Bret Contreras

Yes.

Dr. Andy Galpin

You're saying you've trained probably tens of thousands of women at this point have been through your programs-

Dr. Bret Contreras

Yeah. Oh, yeah

Dr. Andy Galpin

... and things like that. What you're just saying is, on average, most people that have come through your systems want more glute development, want to have bigger glute muscles. Where men also maybe want big glutes, but also want bigger arms and things like that. The other thing that you would want to think about here is there's often a case when women don't want hypertrophy in certain areas. So they oftentimes will want bigger glutes but not want bigger thighs.

Dr. Bret Contreras

Yes.

Dr. Andy Galpin

Right? So part of what you're talking about here and all the exercises and the methodologies you just laid out are ways that can help you potentially grow the glutes without also then growing the thighs and other parts. Did I have that-

Dr. Bret Contreras

And by the way, that was a blog post I wrote in 2010, and I realized this is a thing. And say you don't have big glutes and you're a woman, and then from the side view, I go and get your quads and hamstrings bigger-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... and then your glutes don't grow, they look even smaller now.

Dr. Andy Galpin

They look smaller.

Dr. Bret Contreras

It's proportion.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

And that's something that men can't seem to fathom, because why would you not want big quads and hammies? But if you have a certain aesthetic, a lot of Asian women that I've trained who have muscular quads but then flat glutes, they don't want to do more squats. And I'm trying to get them to, I'm going, "Squats are good for your glutes." And they go, "No, they grow my quads, Bret." "You have me front squatting 155 and my quads are huge. I don't want to do squats anymore."

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

I've learned this over many, many decades of training women. So you actually make their glutes proportionally look smaller when you do that. So it depends on if you train the thin person that needs muscle everywhere versus the person who has big legs and flat... And we all have the right to-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... train. Every man does it. Every bro has problem areas and strong points, and so you look at everyone who, people's training splits.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And we all have a preference that we throw in that makes our training unique compared to everyone else's.

Dr. Andy Galpin

Right. So you're not necessarily saying there's a difference in physiology or anything like that.

Dr. Bret Contreras

It's just goals.

Dr. Andy Galpin

It's the goals and being specific-

Dr. Bret Contreras

Well, the physiology, I think, you don't even really need to take that. Yes. You know all of it, all the differences in hormones and everything, and the recovery differences and stuff. But I don't think that has to change much at all. It's just a matter of preference. And then some women who are listening to this will be like, "Why would you not want to grow the quads and hammies?" Or, "I don't care about glutes. I just want to be strong." And that's fine, but we're talking about the masses.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And most women, they look at the human body, and they go, "I want to split it up this way." They look at the lower body and say, "I want to do that three times a week." And upper body, they typically do, some do none.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Some do twice a week, two upper body sessions. Some just do full body training and work it into their... I would say with my programs that are out for *Booty by Bret*, it's three full body days. But here's the deal. You do one press, one compound press, could be vertical, could be horizontal. You do one pull compound, whether it's a chin-up, a pull-down, or a row, and you do that three times a week. That beats what most of them are doing for body part split training.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And I don't want to go off on a big tangent here, but with *Booty by Bret*, I will tell them, "I want you getting 10 chin-ups eventually." And they're like, "What? I can't even do one." Well, keep doing negatives. But having that goal will do more for your upper body development than having your one back day a week where you do these wimpy pull-downs and put it on 70 pounds-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... because that's what all my girls will want to just put on 60 and 70. They don't go to 80, 90. I'm like, "What do you weigh?" "I weigh 130." "Then you need to be doing 130. You want to be able to do chin-ups, you better be doing 130 for reps."

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And anyway, but that tends to develop their upper bodies really, really well. And then, a lot of women, especially in bikini, they want the side delts, so throw in your lateral raises. But it depends on the woman, but they tend to want to do upper body twice a week, and some of them will have a back day and a shoulder day. And I don't think that's as wise as having two upper body days because of frequency. But anyway, they always have at least two lower body workouts a week.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Always two, sometimes three. And some girls go crazy and want like To train glutes every day. I got creative in how to make that work because they're obsessed.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And I get it. We've all been there. But they're like, "I want to train glutes every day." How could you do that? Well, it's doable, it's just you got to do more short muscle position stuff, more band work. And then people will say, "Bands suck." Okay, how come during COVID, people's upper glutes grew like crazy? Because they got a glute loop around doing tons of abduction because they're bored as hell.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So, they work.

Dr. Andy Galpin

Today's episode is sponsored by Momentous. Momentous makes the highest quality supplements on the market, period. Many of you know me, and you know that I do not trust the vast majority of supplement companies, and for good reason. Many studies have shown that anywhere between 10 to up to 40% of supplements have accidental contaminants, intentional alterations, mislabeling, or other serious issues. But Momentous is different. I literally spent years vetting the company, their products, and leadership team before personally officially partnering with them in 2023. Every single one of Momentous's products is third-party tested to ensure quality, and many are even NSF certified for sport. Now, while I love all of their products, the ones I use the most, both personally and with my clients, are what I call the big three. And these are the omega-3 fish oil, creatine, and newly improved whey protein formula.

Dr. Andy Galpin

These three supplements have fantastic data supporting their benefits. Whey protein for lean muscle mass, omega-3s for brain health, and creatine for both muscle and brain support. And they have been shown to be very safe across basically all populations of people: young, old, men, women, et cetera. Now, nobody has to use supplements, and I hope you never feel pressured to do so. But if you're interested in supplements, it's important that you get them from the highest quality providers. You don't want mercury in your fish oil or lead in your whey protein or anything like that. So that's why I stick exclusively to Momentous. If you'd like to give Momentous a try, go to livemomentous.com/perform to get 20% off your order. Again, that's livemomentous.com/perform to get 20% off. I'm very familiar with the Booty by Bret program. My wife does it. She loves it. It's three days a week of total body every day, and then you have two-

Dr. Bret Contreras

My apologies if you have to listen to my voice, if you hear it in the background.

Dr. Andy Galpin

I don't. No.

Dr. Bret Contreras

Okay, good.

Dr. Andy Galpin

If anything, it helps me. It's three days a week total body, and then there's two additional bonus days-

Dr. Bret Contreras

Pump days. Yeah

Dr. Andy Galpin

... that are just for the glutes that you do. So that's what you're referring to. Your program is such

that if you only want to do it three days a week, fine. If you also want to do four or five, you can add those things on. And the way that you've gotten around that, as you just mentioned, is those additional days, you just called it a pump. But it's non-damaging, non-fatiguing, things that will stimulate a little bit of growth, but it's not going to crush you-

Dr. Bret Contreras

Yes

Dr. Andy Galpin

... for your next workout, because those three workouts are when you're getting your true maximum mechanical tension and stimuli and things like that. So I want to walk through that whole program. But before we go-

Dr. Bret Contreras

Side note on mechanical tension. I just called Brad up. I'm like, "Brad, why do we say mechanical tension? What else could it be? Psychological tension?" Let's drop the word mechanical. It's just tension.

Dr. Andy Galpin

Muscular tension.

Dr. Bret Contreras

Tension on the muscle. Why do we have to say mechanical?

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Anyway, keep going.

Dr. Andy Galpin

Okay. All the way back, though, you started off your career, you mentioned a little bit of your backstory I've heard before. You didn't have large glutes as a kid. You wanted to develop them, so you got focused in this area. I said initially, where I had first saw your stuff was, again, I don't even know. Probably before 2010. I don't know, when did you start writing for things?

Dr. Bret Contreras

2009 for T Nation.

Dr. Andy Galpin

2009. Right.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

T Nation stuff all the time over there. It's very funny. The strength conditioning nerds are going to understand this. The rest of you probably won't. But-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... these things like T Nation were the only thing we had.

Dr. Bret Contreras

T Nation was the greatest-

Dr. Andy Galpin

Back in the day, right? And like some of the-

Dr. Bret Contreras

The early 2000s and-

Dr. Andy Galpin

Some of the articles were wild-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... on there. And then there'd be people like you, and I'm like, "My God, this is a dissertation. This is references."

Dr. Bret Contreras

And all the top strength coaches. You wanted to be a top strength coach.

Dr. Andy Galpin

That's how you earned your stripes.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

Actually, a little bit of a side note. You're the example I also give of people think that, wow, you got a million followers because you did a... No, no, no. You were famous in this whole field way before Instagram existed. From things like putting your chops in on those articles, speaking at scientific conferences before you had a PhD. I don't even know if before you had a master's degree. But you were using science as best you could in application. So you spent, I don't know,

what was it, at least 10 years just purely coaching and writing for the most part? You have probably 25 years of lifting yourself?

Dr. Bret Contreras

33 years of lifting, 28 years of coaching.

Dr. Andy Galpin

28 years of coaching.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

And this is a lot of high-volume personal coaching. You have to be in the top half a percentile of people with a PhD in the field in terms of coaching hours.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

Not that many people there, right? So at what point in that journey did you get super focused on the glutes? You mentioned why, the personal side. And then I'm going to ask this inflammatory-

Dr. Bret Contreras

Yes

Dr. Andy Galpin

... on purpose. When did you, Bret Contreras, invent the hip thrust?

Dr. Bret Contreras

Okay, so-

Dr. Andy Galpin

And I'm a little bit smiling when I say that. I know some of the backstory, but I actually don't know the whole answer here, so.

Dr. Bret Contreras

Yeah. I think you'll be pleased to hear it. Okay, so when I was 16 years old, so I'm 48. So when I was 16, it was 1992. I wanted to lift weights for two reasons, and maybe every guy does this in the beginning. To stand up to bullies and to get laid. I would look at my body in the mirror. My friends were athletes, and they were developing, and I'm like, "I'm this scrawny... What girl would ever want to see me naked?" I wish I had the confidence that other people do that don't care.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

That just have the gift of gab, and women love them. But I was insecure. I was like, "Why would anyone want to ever hook up with me? I'm so scrawny." And I hated being bullied more than anyone. I remember getting my back- When we grew up, it was kind of worse. Now-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... I was a teacher for six years. I taught high school math for six years.

Dr. Andy Galpin

I'll try and figure it out.

Dr. Bret Contreras

It's not as bad.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

There are anti-bullying policies, thank God. But back then, I'd have some kid come up and slam my head into the locker or something, and one time I was out at an event, and then some guy's like, "I don't want to hear you talk. If I hear you talk, I'm going to hit you in the face." And he was the toughest guy in the school. I didn't speak the whole night, and all of a sudden, someone's like, "Bret, Bret." And I'm like, "I can't talk." And then I answered them, and he happened to be coming up, and he just hit me in the jaw.

Dr. Bret Contreras

And I was like, "Oh, I wish I was bigger than him. I wish I could bully him." And that's what really fueled me to start lifting weights. But I heard two specific instances. I heard these girls saying, "I can't wait to go to football practice and watch the guys training. I love staring at their butts." And I'm like, "Oh, great. I'm going to be a 40-year-old virgin."

Dr. Bret Contreras

Women want glutes. I look so bad from behind, my butt. And then the next story is I'm playing golf with my sister's boyfriend, bending over to swing. We're on the ninth hole, and he's like... And it's so funny because he became so descriptive. He was like, "You know, Bret, your back goes right into your legs. It's like you're missing the gluteal musculature. Most people have a prominence that juts out, and your back goes right into your legs." And I'm like, "Why do you feel

so comfortable talking about my biggest insecurity?" I remember just going, "I am not okay with this. I'm going to do something about this." So I started reading everything I could. In the bodybuilding mags, you had to just read their leg day. They didn't talk about glutes. It was, "What does Ronnie Coleman do for his quads and hammies?" Because they will not mention glutes. It's like-

Dr. Andy Galpin

Hmm

Dr. Bret Contreras

... the muscle whose name shall not be mentioned. It's bizarre. They still, to this day, have this homophobic association with glutes and with hip thrusts. It's weird.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

I cover a lot of it on my Instagram. My idols, Tom Platz, the first thing he ever posted on his Facebook page was, "Drop the useless hip thrust," or like, he didn't want to make a post about it. He's my-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... Tom Platz's legs.

Dr. Andy Galpin

Sure, yeah.

Dr. Bret Contreras

And Lee Priest-

Dr. Andy Galpin

Sure

Dr. Bret Contreras

... I just responded in an interview, and he's bashing hip thrusts so bad. And if you're a man doing hip thrusts, take your tampon out, and it's funny. So I had to learn about glutes basically through bodybuilders, what they did for the leg days, but also through other resources. And when I was 19 years old, my cousin bought me this book, "The Complete Guide to Butt and Leg Development." And that was 1995. I still have the book. It's on my coffee table in Vegas.

Dr. Andy Galpin

Hmm.

Dr. Bret Contreras

I still flip through it. It's still in mint condition, but I read it. On Christmas, I just left the party and went into my room and read it for two hours, came back to the party. I'm like, "This is my favorite present. How did you know?" And he goes, "Dude, I've never met someone so obsessed with their glutes." And it was 1995, and since then, my enthusiasm for glutes has never diminished. I'm still just as excited, but it was because I had no glutes. And no one becomes the glute guy if they're just born with good glute genetics, because if you have good glute genetics, guess what? You never need to do an isolation movement.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

You just squat, and then you're the guy going, "LOL, just squat. Quit doing that stupid kickback."

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

"Quit doing that stupid exercise. Just squat."

Dr. Andy Galpin

Yeah. I'm going to be real honest, that was definitely me for a good decade or more. That's a part of my physique that it grows very easy and very well.

Dr. Bret Contreras

Mm-hmm.

Dr. Andy Galpin

And so I definitely dismissed much of these things. In fact, more than that. I was pretty aggressive earlier in my career. I was like, "You don't need any of these things. Just squat, just squat."

Dr. Bret Contreras

Mm-hmm.

Dr. Andy Galpin

It took me age, like it does everybody else, to go, "Oh, you know what? Not everyone's like me." Right? So I don't need to emphasize glutes.

Dr. Bret Contreras

And as you age, you get injuries. Injuries are what-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... taught me a lot. Half of what I know is by-

Dr. Andy Galpin

Working around stuff

Dr. Bret Contreras

... you get an injury, and you work around stuff, you're like, "Oh my God, I like this," or, "Oh my God, I came back stronger?"

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

"I was missing something." So you asked about the hip thrust. So it's October 10th, 2006.

Dr. Andy Galpin

There's a date, exact date.

Dr. Bret Contreras

I'm watching UFC. UFC fights with my girlfriend at the time. Her name was Jeannie. And UFC fights in Phoenix, Arizona, or Scottsdale, come on at 9:00, 10:00 o'clock. So we're watching the fights, and I didn't care who won. It was Ken Shamrock versus Tito Ortiz, their third fight. I don't care who wins. I just want it to be a good fight because I like both of them.

Dr. Andy Galpin

I was in Phoenix on that fight, by the way.

Dr. Bret Contreras

Really?

Dr. Andy Galpin

That's crazy. It was in-

Dr. Bret Contreras

We were within a few miles of each other.

Dr. Andy Galpin

Yeah, I was at Athlete's Performance.

Dr. Bret Contreras

Really?

Dr. Andy Galpin

So yeah.

Dr. Bret Contreras

Okay. So I know exactly where that-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... that was back before it was X-X-

Dr. Andy Galpin

Mm

Dr. Bret Contreras

... XO or whatever, yeah.

Dr. Andy Galpin

XOS, yeah.

Dr. Bret Contreras

And so, I'm watching the fights and I'm like, "Man, Tito mounts him." And I'm like, "Ken, do something. Don't just lay there." Because I had a twin brother growing up, and we would always grapple. And you'd straddle the person, and you'd be bucking like a bronco. Eventually, you'd buck the person off. I had done a couple of years of jujitsu training. I know the jujitsu guys can say, "Oh, if you have your hooks in," but in MMA, they don't have their hooks in.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

If you're really freakishly strong, a good hip bump or whatever they call it now-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... but a powerful glute bridge can help get you out of that. And glutes help in a lot of ways in MMA. But anyway, I started thinking at the time, I'm like, "That should be an exercise." Now, at that time, I'm reading articles on T Nation from Eric Cressey and these guys saying, "Do these

glute bridges." And I would do them, and I'm like, "I love these. I love the way it feels, but I could do 100." So I just go, "How could you load that? Also, you're limited by the ground. How could you sink deeper?" I went out to my garage. I had an idea, and I thought, "I'm going to move my glute ham developer-" A few feet away from my reverse hyper. I called Jeannie. "Jeannie, come out here and help me." She gets out there. She's like, "Why can't we do this tomorrow?" And I'm like, "Fine, I'll do it myself."

Dr. Andy Galpin

At midnight.

Dr. Bret Contreras

Yeah. "I'll do it myself." And I'm trying to move this GHD across the floor, but I did it. And then I'm like, an average male weighs about 180 pounds. That's four 45-pound plates. I didn't think of the idea to use the barbell for a long time. I took four plates, I put a dip belt.

Dr. Andy Galpin

Mm.

Dr. Bret Contreras

And it was so hard because I stood in the dip belt, tried to get up to my legs, and then I had to lay back on the glute ham developer, shimmy the weight belt up to my lap, and put my feet on the reverse hyper.

Dr. Andy Galpin

Oh, this is super safe.

Dr. Bret Contreras

Okay. They could split apart and you'd fall. I know.

Dr. Andy Galpin

Yeah, immediately.

Dr. Bret Contreras

I sunk all the way down, thrust it up. One. I remember I got to 15, and I felt my left glute start to-- I felt like I was going to pull it. I was like, "God, I'm worried I'm going to tear this thing if I keep going." So I set the weight down and I'm like, "Oh my God, I have a pump from one set." I had never felt that feeling before in 2006. And I went out to my front yard, looked up in the sky. I'm not religious. I'm not even very spiritual. And I looked up in the sky, I go, "I'm going to spend the rest of my life making this exercise as popular as humanly possible." From this point on, my whole life changes, and I knew it. And it was just this random, where your life is going this way, and now it's going this way. And so people will say, "So this is crazy." So I start giving it to all my clients. I'm giving it with body weight. And then I'm like figuring out different ways to load it. And

then my aunt says you should-- I said, "I want to write an article for T Nation.

Dr. Bret Contreras

I think I'm ready now. This is going to be my first article," which it was, "Dispelling the Glute Myth." That was my first article.

Dr. Andy Galpin

That was your first one?

Dr. Bret Contreras

That was the article heard around the world.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Because I come out of the gate strong, and I said this-

Dr. Andy Galpin

I didn't know that was your first one.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

Wow.

Dr. Bret Contreras

And so I'm like, "This is the way you build your glutes." I have me hip thrusting 405. People around the world started doing it right away. That's the time when people would've said, "This is awkward, Bret. We're doing that." That was heard around the world. T Nation back then, they had that forum.

Dr. Andy Galpin

Yeah. Of course.

Dr. Bret Contreras

I was meeting guys down the road, like when I went and got my PhD, this guy from New Zealand, this guy Sam, he's like, "Do you remember? The day you posted that article, I went and did them. I did 405." Because he's a powerlifter.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

He's like, "It was awesome. Do you remember? That was me." So the very next day, guys in New Zealand, guys all over the world were doing it. If someone was doing them, that would've been the time. People would've been like, "Bret, this is awkward. We're doing this here."

Dr. Andy Galpin

Oh.

Dr. Bret Contreras

No one was doing hip thrusts. They never existed. But now, the weirdest thing happened in the world. At that time, so it took me a while to think of using a barbell. I told my aunt about it. She goes, "Sounds like you need to invent something." And I go, "I don't know how to invent anything."

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And she goes, "Sure you do. You were always good at drawing. Draw some up right now." I did. I applied for a patent. I still have the patent. I don't enforce my patent. I could probably make an extra \$2 million a year if I enforced it. I feel guilty-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... because I want there to be as many hip thrust machines as possible. And so, but yeah, they're all infringing-

Dr. Andy Galpin

So you have the actual patent on the hip thrust?

Dr. Bret Contreras

I have the patent since, I think I was awarded it in maybe 2009. And, you can pull it up. You can Google Bret Contreras patent. It comes up on Google. You can see my original patent, all my drawings. But it took me a while to think of the barbell hip thrust. So my first invention was the Scorchers, and it was like that idea, the rounded back pad. I had an angled footplate, but it was this monstrosity. But that's, so I opened up Lifts, my first gym in Scottsdale. That's all we did for hip thrusts was always off the Scorchers, never anything else. And we did three types of hip thrusts. We did band hip thrusts, because I said you need bands, and it needs to be anchored low so there's tension at the start-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... and tension at the top. So the thing was elevated, and then there was band tension from way down low. But you'd get to the top, and it was insane. So we did band hip thrusts. We did single-leg hip thrusts. And I gave a unit to Gunnar Peterson. He trained J.Lo back then.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

He's like, "Bret, this is J.Lo's favorite exercise, but you need handles on this." I wonder if he remembers this. "You need handles on this so they don't wobble around." So I put handles on the unit. It was great. Single-leg hip thrusts off the Scorcher are amazing because it actually changes the strength curve. It's hardest at the bottom.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And you can do that off two benches. If you get two benches and you actually go all the way down to where your butt touches the ground and then comes up, it is hard off the bottom.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

So we would do single leg sinking, really deep coming up, and then we'd do barbell. But the barbell was hilarious. This is what we did in my first gym. Trainer on this side, trainer on this side. So every time someone did barbell hip thrusts, they'd be like, "Coach, I'm ready," and we'd have to run over. We'd be training like 10 people at a time. We'd run over. Two trainers pick the barbell up, the person slides underneath-

Dr. Andy Galpin

Oh

Dr. Bret Contreras

... gets in position, drop it in their lap, they do their set of hip thrusts, then we pick the barbell, you get out of it.

Dr. Andy Galpin

Wow.

Dr. Bret Contreras

And we did that for two years. And by the way, I remember when I said, "Why can't you use the barbell?" The thing is, it would hurt. You need padding. And I googled thick bar padding. I googled this in like 2008, and Hampton was the only one making this thick barbell pad for squats.

Dr. Andy Galpin

Mm-hmm.

Dr. Bret Contreras

And that became, so I made Hampton a lot of money until people started making their own-

Dr. Andy Galpin

Oh, wow

Dr. Bret Contreras

... squat sponge. The squat sponge came out-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... and then we started making ours. But people also used the Airex balance pads.

Dr. Andy Galpin

Mm.

Dr. Bret Contreras

So we'd use those, too. Those were the game changer for the hip thrust. So, all right. So now, I decided to write an e-book, because blogging was popular back in the day. You blogged, but you needed a money maker. So I made an e-book. I'm like, "I can't be telling people do these hip thrusts off the Scorchers. They don't have a scorcher. How can I make this mainstream? Well, they could do it off a bench. When you've only done the scorcher-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... and then you do it off the bench, you're like, "I don't feel it in my hammies."

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

"I don't feel like I'm sinking deep enough." It just doesn't feel right, but then you get used to it. So whatever you do the most, you like, and then everything else kind of feels weird.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

But anyway, we start doing off the bench because I'm like, "I need to teach everyone how to do it using regular equipment." No one did a barbell hip thrust off a bench for a couple of years. Now, I didn't just think of the barbell hip thrust. I also thought of the barbell glute bridge and the single leg hip thrust. And you're sitting here going, Bret, you're looking me in face saying, "No one ever did a single leg hip thrust." No. No one ever sat on a bench and did a single leg hip thrust. At least there's no evidence of it. Now, okay, so prove me wrong. So when I wrote my glute e-book, I did my research. You know I'm a researcher.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

I'm not lazy. I searched for a whole week of my life, like eight hours a day. I thought of every term you could come up with. For the first term could be pelvic, floor, supine, glute, hip, whatever. And then the second term could be raise, lift, thrust, bridge, push-up. And I did every combination of those, and I searched 30 pages deep. I'd go to forums and search. I did see someone glute bridging a keg.

Dr. Bret Contreras

Later on, I found some evidence. So if you're a Bret Contreras hater, I'm going to give you four pieces of evidence you can use against me. Okay. The first piece is the evolution of the bench press. So I have this book from 1924, "Super Strength" by Allen Calvert.

Dr. Andy Galpin

Mm.

Dr. Bret Contreras

And it's 101 years old. And so anyway, real quick, I'm going to fast-forward to modern day. If I made a post right now, like if you post this clip, if we were to collaborate on a post, there would be at least 10 people that write, "LOL, I was doing those in the '90s."

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

"I was doing those in the 2000s." And they remember it that way. I'm not doubting that they think that. I'm not saying they're lying, they don't have good memory. They were doing that after 2009.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Or they'll be like, "My dad was doing that." And I always say, "Okay, I'm a historian. I would love to talk to the people. How'd you do it?"

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

"What padding did you use?"

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

"What set and rep schemes? How frequently? How strong were the people?" But there's no evidence, and what they will always say, this is crazy to me, because we've reached a period of time where people are so insanely stupid that they think that we won't have history of anything before camera phones.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So I'll say, "Prove it. Give me evidence. I'll send out a newsletter to, hey, turns out I didn't invent the hip thrust, this person did. I will give credit." And they'll go, "LOL, like we had camera phones back then." And I'm like, "Oh my God, I have a book that's 101 years old with 200 pictures in the back of it in black and white."

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

100 years ago, we had cameras. We brought cameras to the gym. We have a whole history before camera phones exist, and these people are so, it's inexplicable how insanely stupid they are. They are the dumbest. So anyway-

Dr. Andy Galpin

It's not that you necessarily maybe didn't invent the hip thrust, but you have yet to find any evidence-

Dr. Bret Contreras

Well, here's the evidence. Beyoncé's trainer invented the hip thrust in 2003. That's the only evidence I have.

Dr. Andy Galpin

Okay.

Dr. Bret Contreras

She used a stability... Okay, so I'll go for the four pieces. Number one is Beyoncé in 2003. She's on a VHS. Is that the VH1? VH1.

Dr. Andy Galpin

VH1. There you go.

Dr. Bret Contreras

The MTV's-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... the MTV channel, like-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... the counterpart. VH1 had a series called "Rocking Bodies." And someone sent me this, and I'm like, "This was after 2006." No, it was not. And she's on a stability ball, and she's got a little barbell, and she's doing hip thrusts. That's the only time I've ever seen a barbell hip thrust being performed, but it is with a 30-pound barbell.

Dr. Andy Galpin

Yeah. We're all kids.

Dr. Bret Contreras

And she doesn't have the best form, but I didn't see that until a few years ago. So you could say Beyoncé's trainer, it shows her in the video.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

There's a little excerpt. So whoever this is, she could be given credit for inventing the hip thrust.

Dr. Andy Galpin

If you could find her name, right.

Dr. Bret Contreras

And then if you look at the book, okay, that book I told you about, 1995, it has pelvic raises. It shows glute bridges and single leg glute bridges, but it doesn't show them with weight. But if you go to the back of the program, the back of the book has programs, and it says in one part, "Weighted pelvic raises."

Dr. Andy Galpin

Okay.

Dr. Bret Contreras

But it doesn't show how to weight it.

Dr. Andy Galpin

Got you.

Dr. Bret Contreras

Now, that would be off the ground, but that would be a weighted glute bridge or whatever.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

But it doesn't say how. Now, you look at the book "Super Training" by Mel Siff.

Dr. Andy Galpin

Yep. That classic.

Dr. Bret Contreras

This is a classic.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Classic. There is some pictures from 1977 credited to Yuri Verkhoshansky, this-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... Russian sports scientist, rest in peace. And these are all hip thrusts. It looks like Kama Sutra drawings, but they're all hip thrusts. And you can see these are single leg hip thrusts. There's one, the person against a bench, and they're pushing against their hips. That's an isometric hip thrust. And then there's single leg, where you got your foot on a kettlebell-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... on your foot, and you're doing single leg hip thrusts, and they're special exercises to develop sprinting. Who would've known that 50 years later, we'd now have evidence that hip thrusts are actually better for sprinting than the vertical-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... hip extension exercises. So that was ahead of its time, but these are hip thrust variations. And then another piece was from the late 1800s, early 1900s, the invention of the bench press. So they didn't always have benches. So what they first started, and the strongmen back then- They'd have to kind of do a pullover and press.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

You just were laying on the ground. You just had to get the bar over your head.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Then they started making bigger discs, and you could roll it over, which is what I ended up doing with BC Strength, with hip-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... thrust thruster plates, even bigger.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

But back then, they had to get it over their head, and then they'd do a press. And then people started realizing if I... So it was like Arthur Saxon had the record, and then George Hackenschmidt, and then this Joe Nordquist, and he did it from a-- He would elevate his-- Because you could, if you turn it into a glute bridge and turn in a decline, you were even stronger.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

And then some guys started realizing, "Hell, I'm just going to..." They called-

Dr. Andy Galpin

Yeah, bounce it

Dr. Bret Contreras

... it a belly toss.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So they would put it on their belly and toss it up, and lock it out.

Dr. Andy Galpin

Lock it out.

Dr. Bret Contreras

So then that was the belly toss method. And then some guy named George Lurich, he was so flexible, he could just go and bridge it all the way up to lockout, put his hips down.

Dr. Andy Galpin

Oh, nice.

Dr. Bret Contreras

And then at that point, they're like, "This isn't even using pressing muscles. This is silly." So, the powers that be, Hoffman... What is Hoffman's name? Joe-

Dr. Andy Galpin

Bob Hoffman?

Dr. Bret Contreras

Bob Hoffman.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Bob Hoffman decided, "This is stupid. Let's get away with all this."

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

"Let's just do the strict floor press." And that's when benches started coming along. So they were doing belly tosses, but for one rep-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... not for reps, and it wasn't with the goal of building glutes. It was to have a stronger bench, which is what you'll see high school kids doing now in gyms, doing anything they can to get a stronger bench press.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

And interestingly, back then, bench press is some of the same criticisms are what you see of hip thrust today. They were a lazy man's exercise.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

Standing exercises are functional.

Dr. Andy Galpin

Overhead press.

Dr. Bret Contreras

This is how you build-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... the real functional muscle. Who wants to artificially expand the pecs? These aren't functional muscles. The real muscles are your shoulders-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... and your biceps.

Dr. Andy Galpin

Overhead press is star, yeah.

Dr. Bret Contreras

You should be doing curls and overhead presses. Who lays down to do an exercise?

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

And then bodybuilders started doing the bench, and then it took off. And then-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... but it was criticized in the beginning, and it's going to be bad for your posture. It's going to be non-functional. It's going to lead to injury. And then people ignored them, and then it now is the most popular exercise today. And the same thing is happening with hip thrust. Now, with the invention of these plate-loaded devices and these selectorized devices, those are the best-selling pieces of equipment right now.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

It's like you're a modern gym. The ladies want the hip thrust machines.

Dr. Andy Galpin

I would be hard-pressed to believe nobody in the history of the world ever did a loaded hip thrust before Bret Contreras. But-

Dr. Bret Contreras

Of course

Dr. Andy Galpin

... that's not what you're really saying.

Dr. Bret Contreras

That's what I tell people. Well, that's what I tell people. Then-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... because I had a coach tell me he was doing it. I go, "How come you never posted about it?"

Dr. Bret Contreras

You didn't realize it was going to be popular?"

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

It's just like, that's the way history works.

Dr. Andy Galpin

Yeah. It just wasn't very popular at all before you. So at minimum, we could say you're the one that brought it to the lexicon.

Dr. Bret Contreras

Sure.

Dr. Andy Galpin

You were not doing it in every gym. It was not certainly in studios. Now, you can't go to a gym that doesn't have a hip thrust machine of some kind.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

Right?

Dr. Bret Contreras

So yeah. And no one will argue that Bret Contreras popularized it. I just don't like basically being called a fraud, as if-

Dr. Andy Galpin

Of course

Dr. Bret Contreras

... I take credit for something I never did. In fact, back in the day, people were calling it the Contreras hip thrust, or two bloggers calling it the CHT, and I'm like, "Don't make it about me. I want this to be popular on its own. Everyone knows I invented it." And then now, no one knows I invented it-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... because the world changed. Social media kind of became a copycat game. Back in our day, we gave credit. We always gave credit. If you didn't give credit, you were dead in your tracks.

Dr. Andy Galpin

Totally. Today's episode is brought to you by Parker University. Parker is the only university in the world dedicated exclusively to human performance. It's also my new academic home. I first heard of Parker after attending their NeuroCon seminar and was stunned. I've been to countless clinics and conferences, and nobody is even close to Parker Seminars. The speakers, the setup, and the total experience are, frankly, jaw-dropping. All their seminars are great, but the upcoming Las Vegas show, which is going down March 20th through 22nd, is going to be extra special. It's featuring speakers like Doctors Andrew Huberman, Tommy Wood, Gabrielle Lyon, and more. But on top of that, I'm personally hosting a co-seminar at the same time. So imagine going to a phenomenal lecture on how the nervous system works, then popping over and lifting some weights with me personally, grabbing lunch, and then settling in for a talk on how NASA scientist Cody Burkhardt is preparing human bodies for life on Mars.

Dr. Andy Galpin

Tickets for this incredible event are on sale now at a special rate of only \$599. But this price will increase as the dates get closer, so do not wait. And yes, you heard that right. \$599 gets you full access to the entire Parker Seminar, expo hall, nightlife and social events, plus two full days of learning and lifting weights with me in the gym and my friend Dan Garner. To see the exact schedule, list of speakers, and get signed up, visit parkerseminars.com. One more time, that's parkerseminars.com. I can't wait to see you there. Okay, so really fast, before we go into some more details about how to train and some of the things, walk me through the difference between a hip thrust and a glute bridge. You mentioned single leg glute bridges. You mentioned different loading strategies. For people that are thinking, like, "I don't know the difference here," what is that difference again between a glute bridge, a hip thrust, and why does it matter?

Dr. Bret Contreras

If you're on the ground, it's a glute bridge. You can do that one leg, two legs. Best way to do it is off the Smith machine, though, because you're on a bench, it's plate loaded, you just load the

plates up-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... and you can go all the way down to the ground. You can always sit on the bench. Sometimes if you're a smaller person, you don't even get to touch down before the plates touch down.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Okay.

Dr. Andy Galpin

So your back is on the ground, your feet are on the ground-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... and you're elevating your hips up in the air, and with some load on your hips.

Dr. Bret Contreras

Yep.

Dr. Andy Galpin

That's a glute bridge.

Dr. Bret Contreras

That's a glute bridge.

Dr. Andy Galpin

One leg, two leg, whatever.

Dr. Bret Contreras

And if you elevate your feet from that position, it's a foot elevated glute bridge.

Dr. Andy Galpin

So you put your feet up on a bench.

Dr. Bret Contreras

Yep.

Dr. Andy Galpin

Yep, which allows you to get your hips up higher and-

Dr. Bret Contreras

Yep

Dr. Andy Galpin

... that does the other things.

Dr. Bret Contreras

Increases the range of motion, but doesn't increase the quad activity.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

If now you elevate your shoulders, that's a hip thrust.

Dr. Andy Galpin

So now you're putting-

Dr. Bret Contreras

You can do one or two

Dr. Andy Galpin

... your back up on a bench or something like that, right?

Dr. Bret Contreras

You put your back up on a bench. And now if you elevate both your shoulders and feet, that's a dual elevated or foot elevated hip thrust.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

So yeah. Basically, hip thrusts are going to build your quads a little bit more, probably. If you want all glute growth and no quad, no hamstring, no adductor, then the glute bridge is probably your lift. Because the thing is, you could say do kickbacks, do these exercises, but these are not exercises easy to progressively overload-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... over the years. Glute bridge is you can, and hip thrust. That's why they're so effective. They're

very conducive to progressive overload. Same with squats, deadlifts, and bench press. The most effective exercises you can keep loading them, you have a standardized range of motion, a way to perform it. You do it this way every time. When you get stronger, you're utilizing progressive overload. You should be growing muscle over time. Yes, there are neural effects and coordination effects, but you should grow muscle over time. And that's why I say, make it a goal to hip thrust 315 for 20. That's your best bet to getting glutes, and people get-

Dr. Andy Galpin

315 pounds for 20 reps for a 250-pound man?

Dr. Bret Contreras

So it doesn't matter. Yeah. It's kind of crazy because you think every other lift you're like, "Well, size matters. What do they weigh?" But I've found that when you're bigger, like hip thrust, it's easier to hip thrust when you're smaller.

Dr. Bret Contreras

It's just more comfortable. When you're bigger, your belly gets in the way, you're just cramped in there, and body weight adds to it. So I would like to say maybe 2.5 times body weight for 20 reps, but really 315 for 20 is very simple. Probably the best metric if there had to be one, but obviously with genetics-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... genetics are 60% of it.

Dr. Andy Galpin

I want to linger on that really-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... fast. Again, what you're saying is you personally having trained, again, thousands if not tens of thousands of individuals, not NFL players, 90% female, probably most of them sub 200 pounds.

Dr. Andy Galpin

What? One or two of them have ever been able to hip thrust 315 for 20? Like how many?

Dr. Bret Contreras

No. Every client I have can.

Dr. Andy Galpin

Every client you have.

Dr. Bret Contreras

And not just... All right. You go to an Olympic weightlifting gym. What are you going to see?

Dr. Andy Galpin

Snatches and clean and jerks?

Dr. Bret Contreras

Well, what equipment?

Dr. Andy Galpin

Oh yeah, you're going to see barbells.

Dr. Bret Contreras

Well, you're going to see-

Dr. Andy Galpin

Plates

Dr. Bret Contreras

... squat stands.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Platforms.

Dr. Andy Galpin

Power racks. That's it. Yeah.

Dr. Bret Contreras

What are you going to see if you go to Glute Lab? Hip thrust stations. In San Diego, we've got like 12 against the wall, just against the one wall on the AstroTurf. That's what we do here. And the other thing is, yeah, if you trained at Westside back in the day, do you think you would've been stronger?

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Well, if you train at Glute Lab, you'd think your 315 for five is impressive, and then you look at these girls and they're freaks.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Freaks. They're doing 495, they're doing 585. So-

Dr. Andy Galpin

Didn't you have a girl just do 800 or something like that?

Dr. Bret Contreras

I have not. I've seen one legit 800-pound hip thrust from a woman. Her name was Daria. Now, the problem is people don't lock it out.

Dr. Andy Galpin

Okay.

Dr. Bret Contreras

A full legit lockout. I've been watching hip thrusts, millions and millions of reps. I'm very skilled at seeing, did you reach full hip extension? They have these Guinness Book of World Records and like contests now you see, and I get tagged in them. I'm like, "They didn't even come close to locking it out."

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

You got to reach full hip extension. This girl, Daria, she did 810 or 800, I think it was 800, legit, in training. She had done one of my strong lifting competitions. The thing is, hip thrusts are last.

Dr. Andy Galpin

Oh, she's tired.

Dr. Bret Contreras

So you've already done squats and deads.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

She didn't get seven, I think it was like 735 or something she did that-

Dr. Andy Galpin

Well, nonetheless, call me still impressed at a 700-pound hip extension.

Dr. Bret Contreras

But my client, Carly, she hit 765, legit, full lockout.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

One of the coolest experiences of my life, and I think she could have done 800. There's another girl, Katie Sonierro, I think could get to an 800-pound hip thrust legit. She's doing the rotisserie one now.

Dr. Bret Contreras

That's using the rotating pad. That's on my-

Dr. Andy Galpin

Oh, that slides with... Yeah.

Dr. Bret Contreras

That's on my Thruster 3.0. The girls like it more.

Dr. Bret Contreras

That also changes the torque angle curve-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... to where it's hardest off the ground, the lockout becomes easy.

Dr. Andy Galpin

Oh, because you can roll back.

Dr. Bret Contreras

Yeah, it just changes-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... it to where... I did it the other day because I did it for the first time. It was always hard at the bottom. It feels I got a belly. I'm too wedged in.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So, I did it with bands and I think I did 405 for 12, and my client Dre is like, "LOL, coach, I'm stronger than you." I'm like, "Dre, it's my first time I did them. I'm still stronger than you. I hope I'm stronger. I'm-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... literally twice your size." So I did it again, and it's really hard at the bottom and then it gets easier as you come up. It's really different.

Dr. Andy Galpin

Mm.

Dr. Bret Contreras

In fact, at the top I'm like, "I feel like I'm going to tip over."

Dr. Andy Galpin

Right.

Dr. Bret Contreras

You're kind of scared that you're going to flip over, but that's an interesting debate because now you're changing. So with that rotating pad, you A lot of the men who criticize the hip thrust say, "Well, it's easy at the bottom, hardest at the top." Well, you can make it. With this design, you can change that around.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

But anyway, now Katie's doing like 900 pounds for four reps or something. It's crazy. Or yeah, maybe it's 800 for four, but she's-

Dr. Andy Galpin

Whatever

Dr. Bret Contreras

... crazy.

Dr. Andy Galpin

It's a lot.

Dr. Bret Contreras

Anyway, women can get stronger than men at this. I would love to-

Dr. Andy Galpin

Oh, you think that?

Dr. Bret Contreras

Relatively.

Dr. Andy Galpin

Okay.

Dr. Bret Contreras

Relatively stronger. I have never seen a man legit lock out 1,000. Well, maybe this guy, I posted it. There's one guy who looked like he had a legit lockout, but you see the strongest powerlifters in the world, they never lock it out.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

And they're doing, they can get to 700, 800 pounds, but it's really interesting, and I think it has to do with that women have possibly better leverage at lockout, especially with their adductors, some of their muscles, but maybe their glutes can probably get relatively maybe a little bit bigger, or at least they're training glutes three times a week. It's going to get bigger.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

But I think maybe because they're not training their hamstrings and everything, too, so their lockout strength tends to be amazing. And I always think it's funny, what, 10 years ago, I'd have all these girls that are like, "I saw this bodybuilder in the gym." And of course, that bodybuilder has a crush on one of my girls, so they're flirting, and then they see him doing hip thrust or glute bridge, and they're like-

Dr. Andy Galpin

Oh, yeah

Dr. Bret Contreras

... "Oh, let me see if I can do it." And they can't do it. And that's because they have strong glutes down deep in a hips flexed position.

Dr. Andy Galpin

Totally.

Dr. Bret Contreras

They can do half reps for days, but then you have them come up all the way and lock it out, they lack that lockout strength, which is something you will hear, what's his face, Nautilus inventor, Arthur-

Dr. Andy Galpin

Arthur Jones

Dr. Bret Contreras

... Jones talk about how when people would start to use the machines, they're so strong in the stretch position.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

They're so weak here, it takes them a while to... They're so weak here. There's this massive imbalance throughout the range of motion.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

So, I do think that there are some anatomical differences that make women stronger at hip thrust, but also it just comes down to, for women, the hip thrust is their bench press.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

You know?

Dr. Andy Galpin

Yeah, of course.

Dr. Bret Contreras

Guys ask you, "How much do you bench?" Women, "How much do you thrust?"

Dr. Andy Galpin

Right. Yeah. So, you've mentioned now a handful of anatomical terms, and you've peppered in a little bit about how to train them differently, but I want to complete that picture if we can. So, just

give me the really basic overview of the glute anatomy. Right? The couple of different muscles there, and then what I really want to get to on that is how do I train them differently if I need to? So, if I want my glutes to get bigger, do I need to be having bands? Should I not use them? Give me that whole picture of saying, "Okay, Bret, I want my butt bigger. Do all I have to do is hip thrust? Do I need to add anything else? What are adductors?" Complete that whole picture about what am I looking at anatomy-wise, and then what implications do I have for training?

Dr. Bret Contreras

Okay. So anatomically, you have attachments at the ilium, the sacrum, and the coccyx. Mostly the sacrum. So, the glute max will-

Dr. Andy Galpin

Tailbone

Dr. Bret Contreras

... yeah, attaches a little bit to the pelvis, and then the sacrum, and a little bit to the coccyx, and then it inserts onto the gluteal tuberosity of the femur, but also onto the IT band, and it's like a-

Dr. Andy Galpin

So, your glutes attach to the back of your thigh, like the back of your thigh muscle, as well as the side.

Dr. Bret Contreras

Kind of the lateral edge of it, though.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

There aren't many muscles like the glutes. It's like a quadrilateral. Why don't I remember this? I used to teach geometry.

Dr. Andy Galpin

That was good, yeah.

Dr. Bret Contreras

It's almost rectangular shaped in a way.

Dr. Andy Galpin

Right. Well, if we contrast this to the quadriceps muscle groups-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... those all come into the patella-

Dr. Bret Contreras

They taper in, yes

Dr. Andy Galpin

... have one insertion point on that front-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... of your knee. That's that knob down there.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

So, what you're talking about is the glutes are different because they don't have that single point of landing.

Dr. Bret Contreras

It's a broadly, and they-

Dr. Andy Galpin

Big fan of attachment

Dr. Bret Contreras

... so, because they attach to the femur, and pelvis, and sacrum, that alone is a big deal. But now you look at their fascial attachments. So first of all, there's some fascial attachments to the pelvic floor, giving it some implications with that, kind of like urinary incontinence, like the pelvic floor function.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

Then you have the attachment onto the IT band, which then attaches down to the tibia. So now, it's almost like that can be considered a tendon.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

So, that would make it a biarticular muscle.

Dr. Andy Galpin

Yeah, meaning it's going to both extend your hip and rotate it out, right? Because it is attached to the outside there.

Dr. Bret Contreras

Well, it attaches to the tibia, not just... All right. Okay, so you're talking about when it contracts. I'll get to that in a second.

Dr. Andy Galpin

Yeah. Okay.

Dr. Bret Contreras

But it also attaches to the thoracolumbar fascia, to the glute medius fascia. A lot of stuff kind of blends in together. So, if you consider the thoracolumbar fascia into the lat, and the lat to the arm, you've got the glute max possibly affecting things up and down the chain from the arm to the lower leg.

Dr. Andy Galpin

So, your back shoulder, right?

Dr. Bret Contreras

Yeah. So, for that reason, these people tend to over-exaggerate and act like these anatomy trains and stuff-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... and the fascia is everything, and these myofascial meridians and everything. But I do think if you took a step back and looked at the human muscular anatomy chart or picture, you'd be like, "The glutes are the keystone." They are the keystone muscle. That's why I'm okay being the glute guy. Would not want to be the pec guy.

Dr. Andy Galpin

Soleus guy.

Dr. Bret Contreras

The glutes are the keystone. They're the-

Dr. Andy Galpin

Plantaris guy.

Dr. Bret Contreras

Yeah. So, they affect a lot of things, and it's like that centerpiece. So then you look at the subdivisions, okay? So, the glute medius, that's been separated into anterior and posterior subdivisions. It probably has anterior, middle, and posterior Glute medius isn't talked about that much. But people act like you can target them one or the other, and the glute medius overlaps the glute minimus. How do you target? They'll be like, "Kick out at this angle for glute med, and this angle for glute min."

Dr. Andy Galpin

Right. So you've got glute max is the big one we think of as glutes, right?

Dr. Bret Contreras

And then the glute max is, so the glute med and min are upper outer.

Dr. Andy Galpin

Upper and outside, right below your hip bone there.

Dr. Bret Contreras

Yeah. And then the glute max is diagonal shaped, and the fiber directions are around 40 degrees-ish. They change between, I can't remember. There's a couple of papers looking at the exact fiber directions. And then when it contracts, you can see bodybuilders squeezing their glutes-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... posing. They become pretty horizontal.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

So I've heard people say, "Oh, glute max is just a hip extensor." If it was just a hip extensor, why wouldn't they be more vertical?

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

They do three things. They abduct, but it's only the upper fibers that abduct.

Dr. Andy Galpin

Yep. Meaning it takes your leg away from your midline.

Dr. Bret Contreras

Yeah, frontal plane abduction.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

So frontal plane abduction, if you're standing up, think jumping jacks.

Dr. Andy Galpin

Yep. There you go.

Dr. Bret Contreras

You're abducting the legs. So the upper glute max fibers abduct. But the glute med and min are the main abductors. TFL as well, but glute med is an amazing abductor. Super strong at abduction, frontal plane.

Dr. Bret Contreras

The lower glute max, there's evidence that it's an adductor, but I have not found any EMG activity with adduction. Now, here's what's interesting. Okay, there's the upper and lower subdivisions of the glute max. They seem to be activated uniquely-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... through EMG, and the whole glute max externally rotates. The whole glute max extends the hip, but only the upper abduct. Some people say the upper is more effective in external rotation. I think it's the entire glute max is very effective in hip external rotation. And when we swing a bat, you'd think, because I used to just think of these things as distinct actions. Think about swinging a bat. You're loaded up, kind of in the stretch position a little bit, and then you contract the glutes. It does three things. You are going to extend the hips, you are going to abduct the hips, and you are going to rotate laterally the hips. They do all three things at once during swinging, striking, throwing. So that's why they're called triplanar. Now, when you bend over, and you're in deep hip flexion, now the glute med and min, their moment arms change where they're not even very effective at abducting the thigh anymore.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Maybe the posterior are, but not the middle and anterior. But now the glute max becomes a better abductor of the thigh.

Dr. Andy Galpin

Yeah. So if you think about this, if you were to be standing up vertical, and I just said, "Do the jumping jack action."

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

This is where you're lifting your leg out to the side. If you were to do this as a common exercise where you lay on your side and you lift your leg up in the air, right?

Dr. Bret Contreras

Uh-huh.

Dr. Andy Galpin

Now, in that position, what you're saying is those small, upper glute muscles, glute medius, glute minimus, things like that, might be adding to that action. But if you were to bend forward, and now, so I'm standing here and I'm hinging forward. I'm doing like an RDL.

Dr. Bret Contreras

Like a seated hip abduction.

Dr. Andy Galpin

Seated hip thing.

Dr. Bret Contreras

Leaning forward.

Dr. Andy Galpin

Now if I do it, those muscles aren't really active anymore.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

Now that entire action has to come from my glute max, right?

Dr. Bret Contreras

Well, I think-

Dr. Andy Galpin

Or likely

Dr. Bret Contreras

... you said may. From the side-lying, the glute med is the main hip abductor.

Dr. Andy Galpin

There you go.

Dr. Bret Contreras

No argument about it. From bent-over position, I think the posterior subdivision would be activated well. You're going to get some activation of the hip external rotators now become horizontal plane abductors and also the glute max.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

How efficient are those at building them? We don't know. But I do include those in the program.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

So now, you said, "How do I build glutes?" Well, first of all, the glute max has upper and lower subdivisions, and some people even say there's the iliac fibers, the sacral fibers, and the coccygeal fibers.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

They might even separate the glute max between three subdivisions. But definitely an upper and lower, and then the glute med has multiple subdivisions, and the glute min. To maximally develop them, you're going to combine a lot of different actions. There's two studies. One looking at the glute size of Olympic weightlifters, and it shows that their glute max is larger than sedentary subjects-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... but their glute med and min are not.

Dr. Andy Galpin

Ah, interesting.

Dr. Bret Contreras

Meaning squats do not grow your glute med and min. Also, the Plotkin study showed that squats and hip thrusts, neither one of them grew your glute medius and minimus. If you want to grow

your glute med and min, you should treat it like any other muscle, and-

Dr. Andy Galpin

Progressively

Dr. Bret Contreras

... train it dynamically through a full range of motion. And there's one guy, this Chasm, pointed out that we're all doing abductions straight out to the side.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

You really should look at the pelvic shape and kind of go in the plane of the glute medius-

Dr. Andy Galpin

Mm

Dr. Bret Contreras

... which is diagonal at 30 degrees. If you look at how the pelvis is shaped and now the glute medius, you should kick out. The problem is it's really hard for people to get that right.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

You have a nice way of showing it in an instructional video. You look overhead, and you tell them, "Turn this foot in, and then drive back." But it's really hard. People, they end up bending over.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

And then they're involving the glute max more. So it's really hard. And then-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... do their foot go in front or in back, and then they end up at... So I have ways of teaching it. But basically, for sometimes when people keep screwing up, I'm like, "Just go straight out to the side."

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

But because the glute med and min have multiple subdivisions, you probably should do different angles of abduction.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

You should go straight out to the side. You should go at a 30-degree angle back. You should also do maybe seated hip abductions straight up.

Dr. Andy Galpin

Mm-hmm

Dr. Bret Contreras

... might develop the posterior heads more. But also on the seated hip abduction machine, bridge up. Do them bridged and do them leaning forward.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Because leaning forward for the glute max, bridged up, you could put blocks, like yoga blocks underneath you, or just maintain the bridge position for the glute med. Okay, what about glute max? You're going to get the most bang for your buck with hip extension. Hip extension exercises take them through the most range of motion. But now you start talking about how to put together the most comprehensive program. I know in 10 years, especially if I team up with you and we start doing studies using this MRI stuff, but God, we have a lot of questions that remain. So right now, my optimal program, the scientific studies we have to guide us are few.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

We've got Kubo from 2019 showing deeper squats are better than shallow squats. But that just-

Dr. Andy Galpin

For glute max growth

Dr. Bret Contreras

... for glute max growth.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

But that just looked at knee angle. They were probably-

Dr. Andy Galpin

Hinging over and, yeah.

Dr. Bret Contreras

No, the beginner's doing the shallow squats-

Dr. Andy Galpin

Oh, staying vertical. Right

Dr. Bret Contreras

... were probably staying vertical.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

And we don't have a study looking at super deep squats versus parallel. I think parallel would either be more effective or same. I don't think you need to go past parallel for glute growth.

There's two studies on quads showing you deeper is not necessary. That Kubo study showed-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... same quad growth, but it showed greater adductor and glute growth going deep. So that's the study that people cling to about glutes being worked more in the stretch.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

There's also an unpublished study that should, I don't know why it's not published yet, by Mao, showing kickbacks grow more glute in the stretch position, but it's a straight leg kickback.

Dr. Andy Galpin

Mm.

Dr. Bret Contreras

Kind of weird. Who does straight leg kickbacks? You're not stretching it the most. You're not-

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And they only went to neutral. They didn't go into hip hyperextension.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So that doesn't have a lot of ecological validity with how we do things in the field. So anyone who's scientific right now, who trains people in real life and works with people, and then also tries to incorporate the science, all right? This is what a reasonably-- Because you get these crazy, in every aspect of social, every field. There's these politics. You look at anything, even in your world, more of the physiology and performance world, you'll get these coaches saying this way and this way.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

You'll get people saying, "Just train glutes in the stretch position. Every muscle grows best from the stretch position." But that's a fascinating area. I have every study on it categorized into the folders. The verdict is not out on every exercise, and depends if you're a beginner or trained-

Dr. Andy Galpin

Mm-hmm

Dr. Bret Contreras

... and how long is long enough. But what that whole category of research has not looked at is combining them into basically what you can recover from. Because it might be that if you just could do one set a week, what would be the best thing to do? Maybe it'd be a set of walking lunges to failure.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

All right? If you can do two sets. Now, what if you have all the time in the world and you don't mind doing whatever it takes? Well, then I would say train three days a week at least. But what if you could do hip thrusts every day? You'd probably get some people developing overuse injuries. But my point is-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... you could recover from that. Would that be more effective than training long muscle lengths twice a week? Yes, it wouldn't be as efficient, or possibly wouldn't be as efficient, but you could recover from way more. What if you don't create any muscle damage after a while, and you just stimulate hypertrophy, and you can expedite the rate at which new muscle is laid down? We don't know. There's a lot of these questions we don't know yet. So right now, train the glutes three days a week, and follow the rule of thirds. The rule of thirds is something I came up with to illustrate this concept. When you're doing vertical exercise, those are the most demanding on the central nervous system. Well, it's funny because if you've seen the research on that, we really don't have a lot of evidence that it's more demanding on the central nervous system.

Dr. Andy Galpin

Yeah. I'll hold my tongue, but go ahead.

Dr. Bret Contreras

Yeah, we need evidence of that because people know what it means. It-

Dr. Andy Galpin

By vertical exercise, you're meaning squats, things like that, right?

Dr. Bret Contreras

Squats, deadlifts, lunges, step-ups, Bulgarian splits-

Dr. Andy Galpin

When you're up and down. Yep

Dr. Bret Contreras

... squats, skater squats, pistol squats, good mornings, and all their variations.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Those are the vertical exercises. The horizontal are hip thrust, glute bridges. Your single-leg hip thrust, your back extensions, 45-degree hypers, your kickbacks.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

But within those, this is what makes this so complicated. You can make things more

knee-dominant or more hip-dominant. Even kickbacks. What if you did kneeling kickbacks?

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Then it becomes like a step up.

Dr. Andy Galpin

It is.

Dr. Bret Contreras

So I'm talking about an upright kickback.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And then a back extension off a GHD is horizontal. That's pure horizontal. 45 is halfway between, but we call it horizontal-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... because it works the squeeze position more than the stretch.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Those exercises do not beat you up. In fact, after you've done them for a while, they don't beat you up much at all. They don't create nearly as much muscle damage. So those can be done more frequently and with more volume. And then lateral exercises, those are like penalty-free volume, because you never do too much. Those are going to work more of your glute medius and stuff. If you lean forward, yes, you're going to work more glute max, but they don't beat you up. We just do two to six sets, depending on someone's goals, typically at the end of the workout. But if someone really wants to grow their upper glutes, I might say, start with abdu-- Think about it. If you're really wanting to grow your upper glutes, begin with a frontal plane abduction movement, and maybe end with one.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

So then you do the rule of thirds. And then here's another simple system. Three times a week, pick one exercise from four categories. The first category is your thrust bridge, and this could be in any order. The second is your squat lunge. And when I say squat lunge, I mean split squat, step-up-

Dr. Andy Galpin

Right. Yep

Dr. Bret Contreras

... single-leg leg press.

Dr. Bret Contreras

And then you pick a hinge. And the hinge, this is where it could be vertical like an RDL.

Dr. Andy Galpin

Mm-hmm.

Dr. Bret Contreras

It could be like a 45-degree hyper, it could be a reverse hyper, but it's more straight-leggy hip extension. And then pick an abduction movement. The abduction could be frontal plane, it could be horizontal plane leaning forward. It could be hip external rotation still. So, I call that abduction, like lateral rotary.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

So, you do your vertical, your horizontal, your lateral rotary. But pick an abduction, but also include an abduction. There aren't that many hip external rotation exercises. We do two of them. The cable cuff where you spin.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Those are hard to master. They're hard to teach. But anyway, when you do that system, you will fully develop your glute max and glute med and min. Because when you do it-

Dr. Andy Galpin

But you pick one from each of those four. That's how you develop-

Dr. Bret Contreras

And do it three times a week

Dr. Andy Galpin

... three times a week.

Dr. Bret Contreras

Don't do the same exercise every time. That's boring.

Dr. Andy Galpin

Lots of variation to make sure-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... if there is an effect of range of motion, if there is an effect on activation-

Dr. Bret Contreras

Yes

Dr. Andy Galpin

... that you're covering all your bases.

Dr. Bret Contreras

And it's more fun, and-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... that's when I see people be like, "Just do RDLs." These girls train three times a week. First of all, you can't recover from doing squats and RDLs three times-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... a week with intensity, with sufficient effort. But also, yeah, it's boring, and you better be throwing in single-leg RDLs that are not as taxing on the low back.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So, what I've found is you cannot do too much. These guys that are telling people, "Here's a science-based glute workout," they don't train women. Because I'm telling you, most of them train three days a week. They train lower body three days a week. These programs would crush

people-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... would absolutely crush these women. I get carried away sometimes. So, I don't do drop sets anymore. I don't do these crazy burnouts. I don't do crazy super sets.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

I even do lower reps now than I used to, because we used to get carried away. I even used to do sumo deadlifts with the deadlift bar, and touch and go.

Dr. Andy Galpin

Oh.

Dr. Bret Contreras

That's like-

Dr. Andy Galpin

Oh. Oh

Dr. Bret Contreras

... these girls can-- I had girls doing 315-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... back in San Diego. Ashley got 19 reps.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Dominique got 11 reps. Because touch and go, you can bounce-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... that bar up.

Dr. Andy Galpin

Yeah. You can move.

Dr. Bret Contreras

And everyone's cheering you on. Cool. You did something good, and then you're sore for a week.

Dr. Andy Galpin

Yeah. A month.

Dr. Bret Contreras

You can't duplicate that for a month-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... because you're so beat down.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And that's what I mean. So, maybe it's muscle damage, maybe it's-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... damage to fascia, to discs.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Something Chris Beardsley pointed out to me. When you do a conventional deadlift, you're doing a concentric lift, right?

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

But what happens to the erectors? You line up in the arch.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

You go to pull, the hips shoot up a little, the back rounds a little bit, you pull it up. Before the bar left the ground, the erectors went into an e-- You're activating it.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

It went into an eccentric, so that can create more damage, more-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... something about the spine when you really do squats to failure, deadlifts to failure, those beat you up. So, you need a good mix within those categories. Within the squat lunge category, some should be bilateral, some should be unilateral. Some should be more quad-dominant, some should be more hip-dominant. Meaning you can do a high bar squat with the feet elevated, but that's going to be more quad. You can also do a low bar vertical shin box squat, sitting back. That's more hip-dominant. So, you want to have variety within those. With the deadlifts, sometimes you might do a conventional sumo deadlift, sometimes an RDL or stiff-leg deadlift, but sometimes single-leg variations. Single leg, and even good mornings. You can do single-leg good mornings off the Smith machine. You can get good at good mornings, too. People say they're dangerous-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... but that's because they don't start off light and work their way up. Good mornings are good variations to do, but the hinge variations should mix between deadlift and good mornings, and then also 45s, and reverse hypers, and back extensions. And then the abduction should be blended between frontal and transverse plane. And there's so many abduction movements.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

There's side-lying hip raises, extra range side-lying hip raise. My favorite are glute medius hip thrust and glute medius kickbacks. You can Google those. But basically, then the hip thrust

variations should blend between, you could do double leg, you could do single leg and B stance, but mostly double leg, but vary them between barbell, Smith machine, and plate-loaded devices. But also, in this system, you're getting plenty of stretch position work. So, with the hip thrust, it doesn't always have to be emphasizing full range.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

Or you can emphasize the lockout in a few different ways. We do a lot of pauses at the top. We do a lot of bar plus band, where you connect the bar to bands, makes the lockout even harder. And you can do pulses, where you're just doing the top range of motion.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

If you only did hip thrusts and that was all you ever did, then you should probably do some bottom pauses.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

Bottom range of-- Ways to make the bottom hard. But you get those when you do the lunges, the squats, the RDLs.

Dr. Andy Galpin

RDLs. For sure.

Dr. Bret Contreras

And this is the best system I've come up with. It's the most scientific way to train the glutes as we know right now. Any reasonable person would say that. Because if you said to a bro, "Okay, if you put two inches on your glutes in the next few months," you think they'd train it one day a week? No one would train it one day a week.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

You train it a few times a week, but you got to recover from it. And you can't get carried away. In fact, a lot of times when I train my girls, if I have them do reverse lunges off the Smith machine or the lever squat, the plate-loaded squat, and they do two hard sets, I'm like, "Done."

Sometimes one hard set, and I'm like, "Just be done." You set a PR, I'm like, "You're going to be sore from that." And sometimes they're like, "Coach, I was so sore. Thank God I only did one hard set." That's something no one knows to do anymore. They always just do three to four sets.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Sometimes one and two sets is fine as well. You got to be able to recover. And if you don't recover, then what happens is, this happens in my gym a lot Typically on Fridays, and which sucks, is because if you train Monday, Wednesday, Friday, you have an extra recovery day.

Dr. Andy Galpin

Mm-hmm.

Dr. Bret Contreras

So it'd be nice to be fresh on Friday, train hard, because you got two days to recover. So optimally, that would be your day to push hard, but sometimes they're like, "Coach, I pushed myself hard on Monday and Wednesday. I am beat down." So what they do is they do a short muscle length day.

Dr. Bret Contreras

That's when they film their influencer workouts, and they do-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... I'm like, "You didn't even do that workout." But that got the most likes. So they do variety, they do their-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... fufu, wimpy movements that the men, arguably so, they get pissed at. That's when they do just some kickbacks, some abductions, some light-

Dr. Andy Galpin

Bands and-

Dr. Bret Contreras

Yeah, bands and stuff. And then they do that on Friday. They rest Saturday and Sunday, and come back Monday, and they crush it-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... because they did a wimpy workout. But that's autoregulation. That's how they periodize, but ideally they wouldn't have done too much on Monday and Wednesday to begin with, so that Friday they could have still crushed it. But that's an art unto its own, how to nail your training so that you don't have to deload so much, and you don't have to do radical things. But that's something that takes a lot of years to master.

Dr. Andy Galpin

Today's episode is sponsored by AG1. AG1 is a vitamin mineral drink with probiotics, prebiotics, and adaptogens. Initially, I was extremely skeptical of AG1, as I am with all supplement companies, but after months of discussions with their lead nutrition scientist and the general team at AG1, I've been impressed by AG1's commitment to sourcing the highest quality ingredients and constantly updating their formulas to have the right ingredients in the optimal amounts. AG1 also rigorously tests their products to ensure that every single batch is free of banned substances, allergens, heavy metals, microbes, pesticides, herbicides, residual solvents, and mycotoxins. It's even earned the prestigious NSF Certified for Sport third-party testing approval stamp. Now, most people in the performance space talk a lot about macronutrients like protein, carbohydrates, and fats, and these are obviously critically important.

Dr. Andy Galpin

But so are the micronutrients like vitamins and minerals. And even if you're eating a healthy diet, it's often hard to get enough of these vitamins and minerals, along with the probiotics, prebiotics, and adaptogens, to keep your body performing at its best. It's for these reasons, and many others, that I personally take AG1 almost every day. Now, it's of course not a replacement for eating whole, healthy foods, but it is a great way to make sure that you're plugging in any gaps in your nutrition to improve your energy, bolster your immune system, and just generally help promote a healthy gut microbiome and more. If you'd like to try AG1, you can go to drinkag1.com/perform to receive five free travel packs plus a year's supply of vitamin D3 plus K2. Again, that's drinkag1.com/perform to receive five free travel packs plus a year's supply of vitamin D3 plus K2. Couple of quick questions on that.

Dr. Andy Galpin

You've made, I think, a couple of points really clear. To maximize glute development, whether that's growth, specifically growth or strength, but growth is, for the most part, what we're talking about. You haven't said these words directly, but it's clearly come through in all the examples and the information you provided. Consistency is incredibly important, right? And so all the rationale you're going back on here is we got to be able to do this more often so we can continue to

progressively overload, and that's really been a backdrop here. So as somebody who's probably been responsible for more butt growth than anybody on the planet, I think that's a pretty powerful message from you that says, "Just do enough to stimulate growth here, but don't annihilate so that you can keep training for months or years," and that's where you're going to see these big increases.

Dr. Bret Contreras

Yes.

Dr. Andy Galpin

You also used variation to get there. That is another way to keep yourself in the game, right?

Dr. Bret Contreras

Mm-hmm.

Dr. Andy Galpin

You can use, you call them short moment arms, right? These are, again, things with-

Dr. Bret Contreras

No, not short moment, short muscle length.

Dr. Andy Galpin

Short muscle length, right?

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

Thank you. These are different exercises that you've said don't beat you up, right? And what that means is your joints and the tissue itself won't be as hurt or sore, but you'll still get a lot of results from them so that you can continue with your progressive overload, and you can be consistent, right? One quick clarification on that little system. So you pick one exercise for the four different bucket areas, three days per week, and you said maximize variation. Am I picking, say, from bucket one, one exercise for Monday, one exercise that's a different one on Wednesday, and then a third different exercise on Friday, or are you saying every single workout, pick a totally different exercise per category?

Dr. Bret Contreras

That's such a good question. So ideally what you would do is, okay, so this is the component of the system I didn't talk about, rotating focus. We've read about periodization our whole lives, right?

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

And whenever you read about periodization, it's about changing volume and effort-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... or load and-

Dr. Andy Galpin

Intensity to some variation of it, yep

Dr. Bret Contreras

... intensity. What does intensity mean? Load or effort, so I don't even say intensity anymore, but we basically, you start off with more volume, lighter loads, and do more sets. And then as you go up in weight and use more and more weight and train harder and harder and closer to failure, you do less. So it makes an X. Volume and effort make an X. But it was always assumed to be, I'm always going, "What exercises?" The periodization is kind of like, there aren't good books on it. If you want to read up on periodization, I think my book, "Glute Lab," is one of the best because I talked about all the nuances and stuff. But they never talked about rotating the exercises. And I tell all these powerlifters, and I don't presume to know more than the bodybuilders about bodybuilding and the powerlifters about powerlifting, but I do think powerlifters could get stronger because guess what? Squats and deads compete with each other.

Dr. Bret Contreras

You could say they build each other, but they compete Everything competes up to like-

Dr. Andy Galpin

You generally don't see people that hold world records in both.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

It's usually one or the other.

Dr. Bret Contreras

It's one or the other.

Dr. Andy Galpin

They might have a total as well, but-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... that's because they're ahead in one of them really far.

Dr. Bret Contreras

So, you can't tell me that this lifter wouldn't have gotten better at squats if he quit focusing on deads for a while.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

And vice versa.

Dr. Andy Galpin

You see the same thing in weightlifting, by the way, snatch and clean and jerk.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

It's hard to be best at both.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

One of them runs away than the other one, and you try to win that way, right?

Dr. Bret Contreras

So take some time. I did this just recently. I went, "God, when have you ever prioritized your hamstrings for two months?" So I started every workout with either a deadlift, like a stiff leg deadlift, or a good morning, and then I do two different isolation movements for the hamstrings. When have you ever done three hamstring movements in one workout? I started doing that. Oh my God, it got scary for a while. I'm doing good mornings with 345 pounds for 15 reps. I think I could've gotten 20, but I started rounding a lot, and I'm like-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... "How far can I keep going here?" But, oh my God, I've never really prioritized. You're always doing squats first or deads, but never stiff leg, and you're never really doing as much hamstring work. So anyway, I'm going to tell how I think this applies to bodybuilding, but I'm going to tell you what I do in Booty by Bret. Booty by Bret, I was realizing, okay...

Dr. Bret Contreras

One time, I had this epiphany. Someone asked me how many chin-ups I could do, like, what's my max weighted chin-up. And I'm like, "Well, I can do 12, but I could get more if I trained for it. Well, why don't I train for it? Well, what would I do if I trained for it? I'd probably do chin-ups every day." And then I started thinking about all the different lifts. What if you wanted to get strongest at your bench press? What would you do? What if you wanted to get strongest at your squats? What would you do? How often would you squat? I'd probably squat twice a week, but I can't deadlift hard, not to failure, twice a week. So I realize every lift has its own rules. And then I created strong lifting.

Dr. Bret Contreras

Strong lifting is like power lifting, but with six lifts. Squats, bench, deads, so the three power lifts-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... and then chin-ups, military press, and hip thrust. Those are my six favorite lifts. We got really good. In fact, I would say I'm the world's expert at getting you strong at all six lifts, because that is all my girls did. What I will tell you is it's rare. It's hard to have 100-pound military press, strict.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

But to have 135 is insane. That's elite for a female. What I will tell you is, chin-up, you take your body weight and you add to it, because you're pulling your body weight up.

Dr. Andy Galpin

Mm-hmm.

Dr. Bret Contreras

So if you take your six lifts, your one-rep max, and I'm talking strict. People will all lie. Squatting below parallel. The power lifting rules-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... for the three power lifts, and then with a chin-up, not starting from here, starting from a dead hang and touching your chest to the bar, not just getting your chin over it, chest to bar.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Military, you can't use your legs. They're locked out. From here, overhead. In hip thrust, full lockout, which people just lie.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

They'll add 100 pounds to their hip thrust because they'll get it 80% of the way up and call that a hip thrust.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

It's very rare to get a 12 times body weight total. You get a 13 times body weight, there's only one person in that class so far. Yeah. And it's a cool thing, because I think that's probably the best thing you can do for your physique, is your relative total on those six lifts. And bodybuilders will say, "Who cares about one-rep max? Strength doesn't matter."

Dr. Andy Galpin

Sure.

Dr. Bret Contreras

It does matter for natural lifters, and yes, you can get a good physique from just doing lots-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... of variety and mind-muscle connection, and focusing on slower tempos. But in my opinion, that only gets you so far. You've got to get strong. My girls with the best glutes are very strong. Strong at hip thrust, strong at squats, deadlifts. If I wanted my pecs to get bigger at age 48, after all these years of lifting, guess what? I better build my bench. I can't just get there doing all the flies on all the machines.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Yes, you can theoretically increase volume, but tension on the muscle is paramount, and so you've got to, and not one-rep max, but whatever, your set of six, your set of 10, something, you've got to be setting PRs and getting stronger. So anyway, what I will say is, those power lifts, I started realizing, well, if you wanted to get your deadlift the strongest possible, quit prioritizing the squat.

Dr. Andy Galpin

Mm.

Dr. Bret Contreras

Don't go for PRs. Do squats still, but don't try to progressively overload it.

Dr. Andy Galpin

Save some gas.

Dr. Bret Contreras

Save the gas for the deadlifts.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So what I started doing with Booty by Bret is I had this rotating focus. It's a periodization method I came up with just for Booty by Bret. I wanted to publish it in the method, just based, like Strength and Conditioning Journal.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Because I think it's very innovative. So month one is a well-rounded month, okay? And we've changed it a bit. The original Booty by Bret periodization plan, month one was a well-rounded month. Well, in a well-rounded month, guess what you do? Monday, you squat, Wednesday, you hip thrust, and Friday, you deadlift. So that works out well, because you recovered for all of them.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

Squat, hip thrust, deadlift. And then bench, chin-up, military. And then if you do three full body days, you're going to do a compound upper body press, a compound upper body pull, a squat, a hinge, and a thrust. So five exercises per day for full body strength.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

And then the abduction for the upper and lower body, you throw those in because of the psychological. Everyone wants the upper body abduction-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... for the side delts, the lower body abduction for the upper glutes. Okay. So after this well-rounded month, now you've been pushing everything. Now it's time to specialize. Month two is a squat-focused month. So if you're trying to build your squat, all three full body days can be The first lift can be a squat pattern, but one of them will typically be, some people can handle squatting three days a week. Some people can't. Why risk it? People get FAI if they squat deep.

Dr. Andy Galpin

Mm-hmm. Yeah.

Dr. Bret Contreras

People get knee pain, low back pain. So have two squatting days, like Monday, Friday squatting, and Wednesday a single leg, a step-up, a reverse lunge, a Bulgarian split squat, something like that. Okay. Then what happens after the squat-focused month? Your knees are going to be feeling it a little bit. So it's a perfect time to transition to the hip thrust. Okay? So now you focus on the hip thrust for a month. Every day starts out with a hip thrust variation. Typically, it's barbell hip thrust on Monday, straight sets, pause reps on Wednesday, bar plus band on Friday.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Or pulses or something, or one and a quarter reps. But two of the three are more focused on lockout work.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Now, each one of these months, you're still going to squat, hinge, and thrust every month. Just one is on the focus, the others are on the back burner. Okay, and then what happens at the end of the hip thrust month, you're feeling good again.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

All right? Now it's time for a deadlift month. And then deadlifts, well, you can deadlift three times a week if you do stiff legs, single leg RDL, and RDL.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

But actual full deadlifts like a sumo or conventional-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... or even a-

Dr. Andy Galpin

Trap bar

Dr. Bret Contreras

... a trap bar, a semi sumo, no. But if you do that, have one day, typically say day one, Monday might be stiff leg or RDL, real strict, light, and stay a couple reps shy of failure. Wednesday could be a hinge still, but it's a single leg hinge. And then Friday is your heavy deadlift day because you got two days to recover.

Dr. Andy Galpin

Two days to recover, yeah.

Dr. Bret Contreras

So now after the four weeks of heavy deadlifting, guess what? Your low back is taking a beating, your overall system. Now it's perfect time for a single leg month, single leg and dumbbell month. And that's what I love about that-

Dr. Andy Galpin

So by definition, you're taking intensity out. You're still going to get burns and you're going to feel good, but you're taking intensity out because you cut load down because you're on a single leg,

period.

Dr. Bret Contreras

And two studies have shown, one with step-ups, one with Bulgarians, showed they built squat strength just as well as the bilateral lift.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So you're still keeping your strength up. You-

Dr. Andy Galpin

At minimum, you're going to maintain where you're at.

Dr. Bret Contreras

You're going to main-

Dr. Andy Galpin

You're not going to go backwards

Dr. Bret Contreras

... You're going to maintain.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

You can even build. So it's kind of cool because some people are like, "I grow my glutes during the hip thrust month. I grow my glutes best during the single leg month. I grow my glutes best during the squat month." Maybe squats are good for them, or maybe it's because, during the squat month, hip thrusts are third, and you're doing them with-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... a mind-muscle connection.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Who knows? There's so many moving parts, but it's more fun training this way. So that's how I did Booty by Bret. Then I start talking about, what about bodybuilders? We've been talking about

this. What if you said, "Bret, can you grow your delts?" I just did it this year. When lengthened partials became popular, I'm like, "I'm so sick of doing dumbbell lateral raises."

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

"I'm even sick of cable lateral. I want to see if I can grow doing lengthened partials and doing basically more variety."

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

So I started training delts three times a week, and they got bigger than they've ever been, I think. And yeah, so some days I'm doing heavy dumbbells, sometimes cable, but a lot of times just doing the bottom partial. And then I got really scientific, like how do you maximally stretch this?

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

You really should have the cable facing kind of this way and just go to here. And with a dumbbell, I don't want to do side-lying. But basically, I don't want to go all the way up because after here, there's no tension. But-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... I would just lay on my side and just do halfway up.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Lengthened partials. And just from the greater volume, I grew my delts. Guess what? You get so sick of delt day.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

You get so sick of training your delts.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So yeah, do it for a month. But what if we did that, because maintenance is easy. So I made a video, and I don't even know if I ever posted it because it was the sexual innuendos, but I'm like, imagine having six balls, and this is what progressive overload is. But I'm saying six balls because each ball represents my favorite lift.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

My six favorite for full body strength and musculature, and even function.

Dr. Andy Galpin

The six you've listed earlier. Yep.

Dr. Bret Contreras

The six I listed earlier. So imagine trying to juggle six balls. It's really hard. But what if every time you gained strength, you set a PR, the ball grew a little bit. So every time you set a PR, the ball gets bigger. It gets to a point where you can't juggle all six of them. They're knocking into each other.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Interfere with each other. You try to go up on six lifts every month of your life, you will get nowhere.

Dr. Andy Galpin

No.

Dr. Bret Contreras

The balls will all fall to the ground, and you stagnate, you get nowhere. But what if you have six balls laid out and you take two of them, and you're like, "Okay." And they get bigger, it's okay. It's easy to juggle two balls. And these four are on maintenance mode.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Guess what the literature shows? It's very easy to maintain size and strength with minimal

volume. So these four are being-

Dr. Andy Galpin

One time a week.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

One time a week of very minimal-

Dr. Bret Contreras

A few sets

Dr. Andy Galpin

... a few sets, yep

Dr. Bret Contreras

... one time a week, or even-

Dr. Andy Galpin

Every other week, yep

Dr. Bret Contreras

... So you can maintain your strength and your size with lower vol. So I started thinking maybe we're doing it wrong. Maybe the bodybuilders could've seen better results had they switched the focus-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... from month to month. So one month you're doing-

Dr. Andy Galpin

Body part

Dr. Bret Contreras

... Well, I thought about it. One for upper, one for lower. Because what bodybuilder has ever prioritized glutes and ad- Glutes and adductors go together because when you go deep, the adductors in deep, deep hip flexion actually have better leverage.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So it's really, really hard to do deep stuff and not work your adductors because they have such good leverage and hip extension.

Dr. Andy Galpin

Adductors, by the way, are the opposite What we're clearly saying here is A-D-D

Dr. Bret Contreras

A-D. Yeah

Dr. Andy Galpin

... adductors versus abductors.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

So the abductors, A-B-D, were the jumping jacks. Adductors are the ones that you're pulling-

Dr. Bret Contreras

Pulling in

Dr. Andy Galpin

... your leg close together.

Dr. Bret Contreras

Adductors add to the body, abductors take away.

Dr. Andy Galpin

Right. So what you're saying is in a-

Dr. Bret Contreras

The adductor magnus is a huge hip extensor down deep-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... with deep hip flexion. So-

Dr. Andy Galpin

So your groin muscle.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

So if you are squatting, say, for example, and you're doing a lot of squatting type of activities, and say you only go a quarter of the way down or halfway down, and then you change it and you go really far down, you're very likely to notice really sore adductors.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

Right? Your groins, and this is exactly what you're talking about.

Dr. Bret Contreras

Yep.

Dr. Andy Galpin

Because in that position, they start actually adding to hip extension-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... where in the top position, they don't actually do that.

Dr. Bret Contreras

They have the best leverage in deep hip is slightly better than the glutes-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... on average.

Dr. Andy Galpin

Which is why, again, you can train your groin area, if you want to think about it that way, by doing full range of motion all the way to the bottom squats.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

If everything else works and-

Dr. Bret Contreras

Yep

Dr. Andy Galpin

... you don't have other issues with it, you always-

Dr. Bret Contreras

So you pair-

Dr. Andy Galpin

... see tremendous growth there

Dr. Bret Contreras

So you pair adductors and glutes together.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

So one month for the lower body, you're focusing on glutes and adductors, one month you're focusing on quads, and one month hamstrings. Then the other stuff goes on the back burner. And then for upper body, it's hard to do all of them because arms. So I said one month focus on pecs, one month on the back, and one month on the delts. What about arms? Okay, well, then you have four months, and then-

Dr. Andy Galpin

Sure. Yeah

Dr. Bret Contreras

... I think three months, then you're back.

Dr. Andy Galpin

Now you're just getting greedy.

Dr. Bret Contreras

Three months, then you're back. So I thought about a really effective system. I was going to start Body by Bret to be for guys, but I don't know if I could. I'm busy with Buddha, but it's hard. Anyway- ... I thought that would be a fun system. And then I thought, well, instead of having every person has their system and they have all these theories, how would you test that? Well, you'd have to do a few cycles of it. So it'd have to be a nine-month study. You can have the control group do just regular body part split training.

Dr. Andy Galpin

Mm-hmm.

Dr. Bret Contreras

And then this new method where basically the muscle you're prioritizing, you're training it three

times a week.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

It's hard to train chest three days a week. Quads three days a week.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

It can be done, but that's the primary focus. That, and then you have an upper body muscle, and then everything else goes on the back burner, goes on maintenance mode. Would you see better hypertrophy results blasting and cruising? I don't know. It's just a theory, but it's a strong theory. A strong argument could be made.

Dr. Andy Galpin

Yep. I want to go back. One thing to make sure we finish the loop on this one. You mentioned, what did you call it? The rule of three, or something like that?

Dr. Bret Contreras

Rule of thirds.

Dr. Andy Galpin

What was the rule of thirds exactly again? What was that?

Dr. Bret Contreras

A third of your exercises should be vertical in nature, vertical hip extension. One third should be horizontal, and then one third should be lateral rotary.

Dr. Andy Galpin

All right, perfect. Okay, great. Thank you for that.

Dr. Bret Contreras

When you do that, interestingly, when you do that, it's not just best for the glutes. You also, because the vertical exercises are going to hit the quads and the hammies, the horizontal will get some hammies, too. And, so it's like you're going to get, or that system I talked about where you pick a squat, lunge-

Dr. Andy Galpin

The four. Yeah

Dr. Bret Contreras

... pick a hinge, pick a thrust bridge, pick an abduction. The squat, lunge movements develop the quads and adductors. The hinge movements develop the hammies. And then, so you get nice develop- It's a good system to use in general.

Dr. Andy Galpin

For overall development.

Dr. Bret Contreras

Uh-huh.

Dr. Andy Galpin

If you want to develop all the lower body-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... of those things. Okay. In your, whatever it is now, 20 plus years of focusing on the hip thrust and the glutes and hip extensions and all things kind of in this area, I'm sure you've interacted and had plenty of people, women or not, come up to you and say, "I've tried to grow my glutes. I've tried. It's not worked." Are there any themes that have popped up over those years in those interactions of kind of most common mistakes that they've been making? In other words, people have been like-

Dr. Bret Contreras

Yeah, great question

Dr. Andy Galpin

... "I've been at this for a year."

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

"It's not working. What am I doing wrong," Bret?

Dr. Bret Contreras

Great question. Yes, great question, because those types come to me, and they can get results. It's really hard for some people to get stronger.

Dr. Bret Contreras

So, when I talked about the environment in Glute Lab, like yeah, you show up to Glute Lab.

Dr. Bret Contreras

Yeah, you're proud of your, because you're the strongest person in your gym because you hip thrust three plates per side. And then you come in and you see, in Florida, you see Dre, you see Vika, you see Diane, you see Masa, you see all these girls doing five plates per side. And you're like, "Oh my God." And not sloppy reps. That's the thing about it. I said 315 for 20.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Not sloppy reps. You control it. Full, little slight pause at the top, all the way down, all the way up. Rep 20 looks a lot like rep one. It's not like arching and not hyperextending your spine and anterior tilting and only getting 80% of the way up and jerking. It's a smooth tempo through a full range of motion. That is a great indicator of someone who's going to have amazing glute development. But yeah, I would say most people just can't get strong without a trainer. And I will tell you what fuels me, because I travel between Fort Lauderdale, Las Vegas, and San Diego. I was just in San Diego right before this. And they call it the Bret effect. They independently came up with it in Fort Lauderdale and in San Diego, and they just think, "Bret, I don't know what it is." I've been hearing this for 20 years, 28 years. "I can lift so much more when you're around. I don't know what it is." And I joke that it's my pheromones.

Dr. Andy Galpin

Oh, absolutely.

Dr. Bret Contreras

But it's having someone who trusts you. "Hey, I want you..." This happened the other day. Lele, she's like, warming up. She's Hasn't ever deadlifted above 365 in training. She hit 405 at a competition, then she had a back injury, and she's been... Anyway, when you've coached for so long, you know so much just based off bar speed. Mm-hmm. I don't know what the bar speed actually is, I'm just watching. You know what it looks like. So you have these indicators. When I could watch my client Allegra, when I can watch Lee Lee, and I watch her go 275, and it goes boop, and she's just accelerating on the way up. You can tell when it looks, I go, "You could've done that for 37 reps." I go, "Go 315." She goes, boop. I go, "You could've done that for 37 reps." Okay, I don't know why I said 37, but I go... She goes, "What do I do next?" I go, "Go 385." She's like, "What?" "Go 385." She's like, "Don't warm up in between?"

Dr. Bret Contreras

I go, "What do you want to do?" She goes, "I want to do whatever you tell me." I go, "Then do 385."

Dr. Bret Contreras

And then I announce it, and I'm like, "Everyone, Lee Lee's going for 385," and then everyone's watching. And I always tell them with sumo, watch Defy Con, the bar doesn't fly up. Yep. It doesn't rip off the ground like conventional. Take your time. It could take four seconds for the plates, but you got to maintain good posture. You panic, and you sh- Yep ... you round and you shoot the hips up, and now the lockout on sumo becomes so infinitely harder. Mm-hmm. So, she pulls it, she hits 385, puts it down, she's so happy.

Dr. Bret Contreras

This has happened for so many years that it fuels me. And I love it, too, because when I'm not around, so I travel back and forth, and when I'm not around, they don't go for PRs. When I am around, they go for it. They're like, "Yay, we can PR again." Yeah. And it probably works out in my favor because you don't want to crush them every week. Right. So it's great. So you train at my gym. Just because everyone's so strong, yeah, if you and I trained at some gym where everyone's doing muscle-ups and 20, we'd be like, "Shit, I better do..." You can probably do a muscle-up. I can't. But anyway, never tried. If everyone were doing- Yeah ... 20 pistol squats- Yeah ... and I'm like, "I can barely do a pistol squat. I better get my act together." If everyone were doing Nordic ham curls- Of course. Yeah ... going up and down, and every person could do body weight Nordics for five reps, and we'd be like, "I can't even do one."

Dr. Bret Contreras

We'd be secretly doing Nordics. We'd get a few in. A lot of it's to do with your environment. Yep. So these girls can't get strong on their own. They just don't know what they're doing, even though you can tell them. That's why trainers have a job. Yep. That's why, as of now, personal trainers have job security because it's so hard to do on your own. Something's wrong. A lot of times it's the effort they're putting forth. They think they're training hard, but they could really do five more reps if they really wanted to- Mm-hmm ... at the end of the set. A lot of times, they're sabotaging themselves because, God, trainers around the world when they hear this are going to be nodding their head.

Dr. Bret Contreras

Men and women both do this, but they do it differently. Women will want to combine, and this will piss women off if they hear this clip, but they want to combine weights with yoga, Pilates- Yeah ... spin, everything else, and they'll say, "Well, why? Oh, your heart isn't important? Your heart health? Oh, it's not important to be flexible?" Yes, but you have to prioritize. So if you want hypertrophy and you want glutes to grow, and you're doing all this extra exercise, and you're not really training recovered, and you're so busy trying to fit in all your stuff- Six different balls in the air. Right ... yeah. Different ways. Yeah Six balls in the air. You got to train at the right time. Think about it. If I said, and you got to give yourself every opportunity to PR. What are you going to

do? You're going to make sure you get a good night of sleep. You're not going to go do an hour of cardio before you try and do that lift, try to hit a bench PR.

Dr. Bret Contreras

You're going to eat the right amount- Mm ... just the right amount, the right foods that agree with you. Before your workout, the right time. Some people like to eat an hour before. Some people like to train fasted. But you're going to show up feeling good. You had your pre-workout a half an hour before, your coffee, or whatever gives you the best chance. And that's what you got to do day in and day out for lots of years. And what I see is when you're just squeezing in your workout at the end of the day when you're already stressed, and then you're just going through the motions- Yep ... you're not going to grow maximally. You might see some results, and then too much variety, too much program hopping, trying to do every exercise. I love all the exercises. Trust me. In my gym, I love quads and hammies, too, so it's hard, because in my gym, I've got hack squat machine, the pendulum squat machine, leg presses, Smith machine, the V squat.

Dr. Bret Contreras

I've got it all. What do I do? Yeah. I want to hit quads. Sometimes you're like, "I've been so distracted. I haven't done squats in a while." And you're going, "Okay, I got to get back to squats." Oh, I also have belt squats. They're all amazing. And they transfer to each other, which is cool- Sure ... but sometimes you take your focus away. Same thing with hamstrings. I've got every leg curl machine. I've got plate-loaded 45-degree hyper, selectorized 45-degree hyper now. You don't even have to grab a dumbbell. Yep. You just hold onto something and pull. The reverse hyper. I've got plate-loaded deadlift apparatuses, the Hammer Strength. I've got the Pit Shark. We do stiff legs off that.

Dr. Bret Contreras

And all these gizmos, too, like our T-bell, and on the blocks- Mm-hmm ... our sliding leg curl, the rolling, the hammy track and roller, and all these cool things. And then you can be distracted, because it's like you want your hamstrings to grow, try and get really strong at stiff legs, and then a leg curl, seated leg curls or something like. So trust me, I get it. But they're doing too much variety. They're not prioritizing- Yep ... progressive overload and PRs, and doing all the things necessary to give themselves the best chance of PR-ing, like adequate sleep adequate protein, adequate or optimal calories, et cetera. Sometimes you'll go to women and kind of try to gauge how much protein they're taking in. Sometimes it's like they're eating 50 grams of protein in a day, and they weigh 120, and they see great results. When you take that to 90, 100, 110, 120, 130, they see better results that way.

Dr. Bret Contreras

Like some people, it's like magic.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

So yeah. So inadequate protein, inadequate sleep and stress levels, program hopping, but the most is lack of effort.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

And trying to compensate with effort, with volume and variety, and it doesn't compensate for it.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

You can't just do all the exercises. And doing 20 sets with five reps in the tank probably doesn't beat doing one awesome set to true failure and writing it down in your logbook, or on your app, or in your notes on your phone, and then trying to beat it, because that requires a mental challenge, too. When you know you've hip trusted 315 for 15 and you're trying to get 20, and you're like, "How the hell am I going to get 16 and 17? How am I going to get to 20?" And then you know you're hip trusting tomorrow, you're going to be like, "Okay, I better eat optimally today. I better sleep optimally today. And what time am I going to train tomorrow? I'm going for 16. This is going to be tough." It's hard to do.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

And it doesn't always work linearly like that. That's another complication. So that's why you have variety, because yeah, you can't just go, "I got 15, 16, then 17, then 18, then 19, then 20." Usually, you get 15, and then you take a big break, and you do all the things, and then all of a sudden you gear up for 20 again, and it happens. But yeah.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

That's another story.

Dr. Andy Galpin

Today's episode is sponsored by David. David makes protein bars unlike any I have ever

encountered. They have an amazing 28 grams of protein, only 150 calories, and zero grams of sugar. That's right, 28 grams of protein, and 75% of its calories come from that protein. This is 50% higher than the next closest protein bar. Honestly, it's the best-tasting protein bar I've had by a mile. While I often talk about the importance of getting one gram of protein per pound of body weight for things like muscle health and recovery, and the promotion of lean body mass and satiety, the reality is that for most people, getting that one gram of protein per pound of body weight is really challenging. However, David makes that easy. Their bars taste incredible, and are each packed with 28 grams of protein. I eat one almost every day, and always have two or three in my backpack when I'm traveling. Like, literally always.

Dr. Andy Galpin

Initially, I was all about the blueberry-flavored one, but these new peanut butter flavors are just a cheat code of yummy. It probably sounds funny, but I eat them as dessert all the time. When you try them, you'll know exactly what I mean. The macronutrients, one more time, are 28 grams of protein, 150 calories, and zero grams of sugar. If you're interested in trying these bars for yourself, you can go to davidprotein.com/perform. Again, that's davidprotein.com/perform. So certainly, there's issues with effort, right? I would imagine that many people are trying really hard, but their efforts are misplaced. This is the example of doing too many different things. So lifting, maybe not lifting frequently enough, maybe not waiting long enough. It's only been a month, right? You need probably several months. Or you're adding in different forms of exercise and things like that. So you're trying really hard.

Dr. Andy Galpin

Your effort is super high, but there's not enough focus on stimuli to drive that adaptation. There's too much distraction in the training, right? Another distraction you mentioned was changing your programs too often, right? So again, this is where effort could be high. You could be really getting a burn and really getting tired after the workout, but you did 50 different exercises, or you changed them, and because of that, you probably potentially did some maybe lower, less effective exercises. So your selection wasn't great. You were doing maybe all body weight or all light bands, and what you're saying is you might be better off picking one set of one exercise, going pretty heavy, and then just getting out of there, right?

Dr. Bret Contreras

That would be hilarious to do, like a training study where you just have them pick one set to go to failure, and then you can do 15 sets, but we're not going to track it. Just do the mind-muscle connection with those.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

You know?

Dr. Andy Galpin

Squeeze hard as you can.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

Who cares, right?

Dr. Bret Contreras

Feel the squeeze. Feel the glutes moving the weight. But that would be a good system, because when you say progressive overload, it's hard to pin that down for people. Does that mean, do you go up on all four sets?

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

How do you go up?

Dr. Andy Galpin

Another thing that came to my mind here, I don't know how much you've experienced this or not, in terms of, again, let's stick with the same of I've tried to grow my glutes. By the way, I should interject here. We've been talking way more about the glutes than I thought we were going to today, but you could change out glute for anything else. It doesn't actually matter. Some of the details here do matter, the specific studies and the research, and I'm going to ask here in a second about how the glutes are different from other muscles. But I hope what you're gleaning from this is not just only if you're sitting here thinking, "I don't care that much about glutes," or whatever. This is scientific principles. This is how do you answer research questions. This is specific and precision, right? So you're talking about not all exercises are the same. Not all muscle groups are the same. We've dug in on the glutes.

Dr. Andy Galpin

So again, the answers might be different, but this is exactly how you should go about answering it if you care more about the triceps, or the quads, or the calves, or anything else. So this is a system that you developed over, again, almost 30 years now, that can be applied to anything else. So I really hope that people listening are gleaning this out of it and going, "Okay, maybe you do, don't have some variation of love for the glute," but this is really the nuance that goes into getting better results for a very specific question that you've really formulated a career out

of. So, hope that message is coming through. Now, that said, the question on this last particular topic is, again, "I'm training hard, I'm trying to grow my glutes, but mine aren't growing. I'm eating protein, I'm doing all those other things off the field. It's not hormones."

Dr. Andy Galpin

How does one at home, whether they're a trainer, a coach, or the actual person, how do you go about figuring out which of these variations work based on your body type, and what are the things that I should be thinking about and paying attention to before I then throw an exercise out? And I can say things like, "Okay, great. A new study came out. It did show that the, let's just say a goblet squat is not as effective for growing the glutes as a barbell high bar back squat is, but I did the high bar back squat for six months, and I got nowhere." How do I go about that system of figuring out what works for my mechanics and my physiology?

Dr. Bret Contreras

That's such a great question. I know I used to do EMG on all my clients, and then-

Dr. Andy Galpin

Yeah. And just to clarify, you've said this multiple-- EMG is where we can go in and directly measure the muscle activation.

Dr. Bret Contreras

Mm.

Dr. Andy Galpin

So electrical signals for muscle activation.

Dr. Bret Contreras

Yep.

Dr. Andy Galpin

So go back, as you've heard Bret say that a bunch of times, what he's saying is direct measure of muscle activation.

Dr. Bret Contreras

Yep.

Dr. Andy Galpin

But continue on.

Dr. Bret Contreras

Now, the problem with EMG for estimating hypertrophy, it does a good job of measuring activation, the neural portion of it, the active portion, but not the passive portion, the stretch. And-

Dr. Andy Galpin

Which is another way of saying just because a muscle is activated, it doesn't necessarily mean it's going to grow.

Dr. Bret Contreras

Yeah. There's-

Dr. Andy Galpin

There's some crossover there, clearly, but-

Dr. Bret Contreras

Well, think about this because I feel like the long length got carried away for a while, and it was all about stretching and long length. That's been the trend. In 2024, it was all about it was the year of longer muscle lengths.

Dr. Andy Galpin

Yep. Train over a full range of motion versus a part.

Dr. Bret Contreras

But the pendulum can swing too far. Think about this. There are numerous studies that show you can stretch a muscle, and it will grow.

Dr. Andy Galpin

Pure stretch.

Dr. Bret Contreras

Pure stretch. Now, when you stretch a muscle, yes, you probably get a little bit of activation just from protection and guarding, but it's mostly all just passive.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

You're just stretching it. You're not activating it. And it grows through purely passive mechanisms. You can also just slap muscle electrodes on and activate a muscle without stretching it, and it grows.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

EMS, and that's something that I was skeptical about years ago. And now, have you looked at the research on this over the years? Like-

Dr. Andy Galpin

Yeah, I have a Katalyst suit. It's awesome.

Dr. Bret Contreras

Yeah. So-

Dr. Andy Galpin

It's fantastic

Dr. Bret Contreras

... it grows muscle.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Just activating the muscles through muscle stimulation. Now, if you're doing a program like Booty by Bret, where you're covering all your bases, should you do EMS on the side? Should you be stretching a muscle? Can all muscles grow through stretch? What if I wanted to stretch my delts? What do I do? I can't.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

I'm blocked.

Dr. Bret Contreras

You could stretch your rec fem, but can you stretch your vastes enough?

Dr. Andy Galpin

No.

Dr. Bret Contreras

So when people talk about stretch, I'm like, "Okay, hammies, yes. Pecs, yes. Calves, yes."

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Not every muscle I think could benefit. But with that system I told you about earlier, putting muscles on the back burner, if you did the prior, the rotating focus, that would be a good time to say, "All right. I'm going to slap electrodes on the other muscles that I'm not prioritizing."

Dr. Andy Galpin

Oh, there you go.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

Keep the maintenance mode, right? Yeah.

Dr. Bret Contreras

And help add to the stimuli because there's a lot of research showing that EMS grows muscles.

Dr. Andy Galpin

The first time I did the Katalyst suit, I got so sore. Now, part of it was because I pegged it. I just went literally to the end of the contraction capacity and did a 30-minute thing on it and got so brutally sore.

Dr. Bret Contreras

By the way, that's where it's activating all the way, and you're fighting against it.

Dr. Andy Galpin

You're just standing there, right? I'm standing there, basically, wearing a full body-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... TENS unit, basically, right?

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

So it's over there. And it's like everything is squeezing, and I just went to the wire, and I'm like, "Squeeze as hard as you can for 20 minutes." And turns out, that's a lot of muscle contraction.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

And I got sore, everything.

Dr. Bret Contreras

Yeah. So-

Dr. Andy Galpin

User error on that. Well, it wasn't user error. I knew what I was getting into.

Dr. Bret Contreras

So, that's muscle growth through activation and no stretching-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... no passive, so-

Dr. Andy Galpin

None. Yeah

Dr. Bret Contreras

... clearly, there are more multiple-- That to me shows that there has to be multiple mechanisms leading to Rome, leading to muscle growth.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So there has to be a mechanism that's more passive and a mechanism that's more active because they're separate stimuli. So, this is an awesome question. I will just mention briefly that I measured muscle activation back in the day with all my clients, and I learned so much with different people. I had this client, Sammy. She could do squats with 285 pounds, back squats. But if she did a goblet squat with 50 and 70 pounds, she got more glute activation. You're moving through the same range of motion, though. So how could that not matter?

Dr. Andy Galpin

Yeah, more glute activation with 20 pounds of weight.

Dr. Bret Contreras

Something with her about having the load. So then same with a deadlift. If she had a barbell, she could do 225 pound, or I think it might have went up to 315. And then she did 106-pound kettlebell and a 203-pound kettlebell. And something about having the load centered more just activated her glutes a lot higher.

Dr. Andy Galpin

So you-

Dr. Bret Contreras

Not everyone is like that, but she was like that

Dr. Andy Galpin

... you're directly measuring her muscle-

Dr. Bret Contreras

Glute-

Dr. Andy Galpin

... her glute activation

Dr. Bret Contreras

... glute activation in different areas.

Dr. Andy Galpin

And it was the same with a 50-pound goblet squat in front-

Dr. Bret Contreras

Yeah, 50-pound goblet. Now-

Dr. Andy Galpin

... which traditionally should activate the glutes less-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... right? Because it's a front load and it's quad-dominant and all that.

Dr. Bret Contreras

Well, something about-

Dr. Andy Galpin

But it doesn't

Dr. Bret Contreras

... load being centered makes it-- I think when you have kind of lanky, and you're f- ... folding and you don't have the best squat form. You're battling butt wink. You're battling keeping a neutral spine. You might have things shutting off and stuff. We can't always assume. Anyway, I had this girl, Erin, at that same time, and she started doing all this.

Dr. Bret Contreras

I put bands, or I had her do band-seated hip abduction, and I'm like, "Okay, this is activating all the areas, even leaning forward, even getting your lower glute max. You're getting as high of activation doing these, higher than doing one-rep max squats. Well, how many one-rep max squats can you do per week-

Dr. Andy Galpin

Sure

Dr. Bret Contreras

... versus band-seated hip abduction?" So I showed her the results. I said, "You're getting higher activation on bands than anyone I've ever seen. I think you should do bands every day, a lot of band work every day." So she got carried away, eventually starts bringing 20 different bands to the gym. I made a post on her, the crazy band lady. But her glutes grew a ton. So when you have these individualized prescriptions, I think you can see better results. But, basically, I don't have a system for that. The only thing I would try is a long length focus twice a week.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So I'd say, "Look, you've been doing something like booty by Bret. Let's switch to two days, and let's focus on glute-dominant squats, low bar box squats, sitting way back to parallel, vertical shin." The shin doesn't have to be vertical, but it's as vertical as possible while-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... still feeling right. And then glute-dominant step-ups, Bulgarians, lunges, meaning-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... not a knee dominant, not an upright-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... letting your knee go way forward.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Keeping the shin pretty vertical, leaning, and then RDLs. And let's do those, good mornings, RDLs. Let's do these exercises for a while, but hit them hard but just twice a week. See if you grow better from that. You're going to know within a couple of months.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

And then if that doesn't work, let's try a short length focus. Let's do four or five days a week. We're only doing hip thrusts and bands. I did this with my client, Beth. Beth did power lifting, but she had a coach that was all about the power lifts, and I said, "Have you ever focused on hip thrusts?" "No, my coach hates them." "Have you ever done band work?" "No, he thinks those are wimpy, too." "All right. Just do hip thrusts and band work for six months and do them as frequently and as much as you can. See how that works." And her butt blew up.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Blew up. So when all these people are like, she was strong at squats and deadlifts. They weren't working for her. And so you'll hear so many anecdotes, and these scientific people, I could call them all out right now, these scientific people, and they don't care about anecdotes.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And to me, they're not scientific.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

Because you can say, "Look at this person." They will just shut it out. They're like, "Well, that doesn't mean anything. What if she wasn't doing squat?" "Okay. I'll show you a video of her squats and deadlifts. She had good form. What do you say then?" They just don't want to reconcile the two. They want to stick to one rigid method, and you got to be flexible if you want to be a good personal trainer. So that method worked better for her. So I would do the two extremes, two days a week of long length glute work versus five days a week of shortened position glute work.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

It could be a genetic-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... reason or just anatomy. You tolerate these, because if you don't tolerate an exercise well, and it gives you pain or fear inhibition-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... you're not going to maximally activate your glutes. So anyway, maybe there are frequency versus, some people respond better to frequency. Even your anatomy. What if your moment arms are terrible in the stretch for glutes and really ideal, and I also think you can change through training when you do concentrics or shorter lengths, you will lose sarcomeres in series. When you do eccentrics or longer lengths, you will add sarcomeres in series. So maybe you can change the way, and that might affect neural activation, too.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

The muscle says, "We've caused this muscle to be more effective at longer lengths or more effective at shorter lengths," and we just don't know enough right now, and that's what always frustrates me about social media right now. It's rewarded these bold claims, camps where you're very strong, like, "This is the method. This is what yields the best muscle growth." It doesn't reward uncertainty. It doesn't reward-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... scientific claims or cautious claims.

Dr. Andy Galpin

Evidence-based as well.

Dr. Bret Contreras

And I get mad because I'm like, "If I don't know the answer to this, then you don't know the answer to this." Because no one researches this stuff as much as me, and I see these people making these bold claims. We don't have the evidence for that yet. We don't know enough.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

There's so many studies that deep squats versus parallel squats, sumo versus conventional. There's not one training study on sumo versus conventional. Hip thrust. Should you do full range? Should you do partials? Should you use bands? We need, like 30 glute studies to be able to speak confidently about what works best. Until then, it's theoretical, and we should be cautious about what we think we know.

Dr. Andy Galpin

What do you think about a system I just sort of jotted down based on what you're saying?

Dr. Andy Galpin

Checkpoint number one, if you're trying to grow your glutes, and whatever exercise you're doing, whatever your program design is, it's resulting in pain. Not muscle soreness, but pain. Your back is going to hurt. Your knees hurt, right? Then pretty obviously stop that.

Dr. Bret Contreras

Immediately.

Dr. Andy Galpin

Don't do that.

Dr. Bret Contreras

Yep.

Dr. Andy Galpin

Right? So the checkpoint you can run through in your head is if in your program, you're then getting injured, whether we mean like a true injury, or is this simply the kind of pain you don't want-

Dr. Bret Contreras

Yep

Dr. Andy Galpin

... then we need to change your program. That seems to be a pretty intuitive-

Dr. Bret Contreras

Yep

Dr. Andy Galpin

... first start. So don't.

Dr. Bret Contreras

Always.

Dr. Andy Galpin

Why? You don't need to be in pain. And then two, this would be the consistency play. We're going to lose training volume-

Dr. Bret Contreras

Yep

Dr. Andy Galpin

... over time.

Dr. Bret Contreras

Yep.

Dr. Andy Galpin

After that, and this is where I just sort of made this up. The second thing I would think about in my head is is the actual exercise feeling like it's working? How much credit do you give or not? Should people feel their glutes working in the workout? I'm sure it doesn't have to be 10 out of 10, but if I'm doing hip thrusts and I don't feel my glutes getting a pump, if I don't feel them getting tired, should I be concerned that that's not working for me or-

Dr. Bret Contreras

So-

Dr. Andy Galpin

... am I okay there?

Dr. Bret Contreras

So let me play devil's advocate and then tell you what I really think. We looked at that in the Plotkin study, 2023. Daniel Plotkin-

Dr. Andy Galpin

Mm-hmm

Dr. Bret Contreras

... the researcher, asked everyone, "Which exercise do you feel your glutes more in, hip thrust or squats?" All 20-some subjects said hip thrust. And they grew-

Dr. Andy Galpin

Equal

Dr. Bret Contreras

... the glutes the same. They were equal.

Dr. Andy Galpin

Maybe that's not a good one.

Dr. Bret Contreras

Well, but I do think it is, because yeah, if you don't feel your glutes much in hip thrusts, it's probably not the best exercise for you. Or you should find a way, a variation, a way of carrying it out or like-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... maybe you like the Smith machine more. Maybe you feel it more-

Dr. Andy Galpin

What position-

Dr. Bret Contreras

Yeah. You-

Dr. Andy Galpin

Right. You're feeling it too much in your quads or your hamstrings

Dr. Bret Contreras

... how could that not help?

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

That's always been a thing, since the dawn of bodybuilding, try to feel it, and every person tweaks their, figures out a way to feel it more. That has to help.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

But it's also, when I was getting... The advantage of being a bro, we wanted to get strong.

Dr. Andy Galpin

Mm-hmm.

Dr. Bret Contreras

When we're in college and we're like, everyone's stronger than you, you're wanting to get stronger. We weren't focused on feeling my delts during a military press. You know what I mean?

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

I just wanted a stronger shoulder press.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And guess what? You get really strong with pretty good form, and everything develops. And that's the argument I hear, both sides of the argument. The people will say, "Oh, tell me how you do a squat without activating your glutes." But come on.

Dr. Bret Contreras

When you're walking upstairs, be super upright, and you'll feel your quads more. And then lean in-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... and let the hips come up a little more, and you'll feel so much more glute walking upstairs. You can't tell me technique doesn't matter.

Dr. Andy Galpin

No, it does. And we saw that in our trap bar versus conventional deadlift study. Right? So the aggregate results are different than the individual results.

Dr. Bret Contreras

Yes.

Dr. Andy Galpin

Because some people, when they did a trap bar deadlift, actually kept the exact same position that they did in their conventional deadlift. Others went super vertical. It was basically-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin
... like a leg press.

Dr. Bret Contreras
Correct. Yeah.

Dr. Andy Galpin
They're standing straight-

Dr. Bret Contreras
Yeah

Dr. Andy Galpin
... up.

Dr. Bret Contreras
Yep.

Dr. Andy Galpin
Where their deadlift, they were much more... So guess what happened with EMG activity? On average-

Dr. Bret Contreras
It was the same

Dr. Andy Galpin
... no group difference, because it washed out.

Dr. Bret Contreras
Yeah.

Dr. Andy Galpin
Right? But the individual person, depending on their arm length, primarily, right?

Dr. Bret Contreras
Yeah

Dr. Andy Galpin
That allowed them to stay in the same position or not.

Dr. Bret Contreras
Yeah.

Dr. Andy Galpin
It completely changed. So for some of our participants in that study, the trap bar deadlift was way

more quad activation. But for others, it literally changed nothing whatsoever-

Dr. Bret Contreras

It's-

Dr. Andy Galpin

... between conventional and trap bar.

Dr. Bret Contreras

I remember Brad Schoenfeld and I did a rear delt study.

Dr. Andy Galpin

Rear delt study.

Dr. Bret Contreras

I think it was the first EMG study he did. He just got his Noraxon unit.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And we wanted to see what's better, neutral or pronated grip. Because back then, everyone said, "If it's not pronated, it won't grow your rear delts."

Dr. Andy Galpin

Oh, yeah.

Dr. Bret Contreras

Well, neutral grip, on average, outperformed it, but there were huge inter-individual differences.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Some people getting way higher one way versus the other. So go with what you feel the most. Because if you're moving a muscle through the same range of motion and getting similar stretch, then the technique that activates it the most, in my opinion... Well, but sometimes that technique can influence the stretch.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

So under the same-- All right. If passive tension is equal, then the higher active tension wins out.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

But you can't have a technique that increases active-

Dr. Andy Galpin

Active tension kills off passive

Dr. Bret Contreras

... activity while decreasing passive. And I think that's the argument-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... for sumo deads. While it gets you less stretch, but it gets you more activation in a lot of clients. A lot of studies, there's only one study by Escamilla looking at EMG with sumo versus conventional, and they showed similar activation of the glutes. But there's probably 12 studies at this point on squats and other exercises, and sumo, in general, you get greater glute activation, but you're going to get lesser glute stretch. So there needs to be a training study.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

And then we need to see for ourselves. But right now, people should just be cautious. They should say, "I prefer conventional because you get a little bit better stretch."

Dr. Bret Contreras

But don't be like, "Sumo is all adductor and zero-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... gluteus maximus. Sumo's got to be the dumbest thing ever." Because then you get all the TikTokers and all the, they repeat your stuff, and then it becomes fact before we've ever even-

Dr. Andy Galpin

Studied it

Dr. Bret Contreras

... looked into it. Yeah.

Dr. Andy Galpin

So, okay, back to my list here of kind of five things. Number one, start off, don't get in pain, two, hopefully you feel something either in the muscle you're trying to train-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... that day or potentially some amount of soreness the next day.

Dr. Bret Contreras

Yes.

Dr. Andy Galpin

Obviously, we know that more sore is not better.

Dr. Bret Contreras

Feeling it, getting a pump, getting sore, these are indicators that you worked the muscle, though.

Dr. Andy Galpin

Seems reasonable.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

If you're not in pain, you're feeling it, even getting a huge pump on the day, and you're still not growing, then potentially think about going heavy. A general problem people have had, that you've sort of mentioned this earlier, is they don't realize that, hey three set to 50 with a band, that may not be the jam to grow-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... every muscle, right? You may have to go heavy.

Dr. Bret Contreras

Really focus on progressive overload, yeah.

Dr. Andy Galpin

Progressive overload, right? My gut is most people will be done by this one-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... in terms of you're going to start growing-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... at this point. But let's say I got that box checked.

Dr. Bret Contreras

Then focus on my muscle.

Dr. Andy Galpin

Now focus on potentially frequency.

Dr. Bret Contreras

Frequency, yeah.

Dr. Andy Galpin

Right? So now I've done, I'm not in pain, my glutes are getting pumped, I'm going really heavy, I'm at 315, whatever the numbers are. Now maybe think about adding in that extra day. Volume, frequency-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... you could kind of play-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... one game here, right?

Dr. Bret Contreras

Sure.

Dr. Andy Galpin

So those would be kind of four and five, volume or frequency. So maybe you need to add another day with those Less damaging ones. So this is where more bands could come in.

Dr. Bret Contreras

Yep.

Dr. Andy Galpin

It's just a way of getting you more volume.

Dr. Bret Contreras

Sure.

Dr. Andy Galpin

But how does that kind of five-step checklist progression sound for somebody struggling?

Reasonable approach there? Is there anything else you would add to that?

Dr. Bret Contreras

I would say have one in there where you really focus on mind-muscle connector activation.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Somewhere in there saying, "What if..." Because there's evidence-

Dr. Andy Galpin

It's not the, right

Dr. Bret Contreras

... there's evidence that it makes-

Dr. Andy Galpin

Quality

Dr. Bret Contreras

... brain changes in the cortical, the motor cortex. There's couples, there's at least one, maybe two, I think there's a recent one too, showing that you get actual changes in the brain responsible for activating that muscle. Maybe if you have a little month where you focus on mind-muscle connection, not even going to failure, squeezing the shit out of the muscle-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... and really trying to target in your brain. In that study, they looked these bands, and it was isometrics because they thought isometrics would build-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... greater brain changes because you're focusing harder.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

And that might make a difference.

Dr. Andy Galpin

Yeah, interesting. Okay. So making sure that, again, if those progression strategies aren't working, that you're just trying to be more connected directly to the muscle, focusing-

Dr. Bret Contreras

Build those connections more

Dr. Andy Galpin

... right, and getting more out of it. Makes a ton of sense. We've gone on quite a journey thus far. I got a couple things, if you've still got some energy left.

Dr. Bret Contreras

I could go for hours.

Dr. Andy Galpin

I know. I know you can. To finish up one. So, one of them is, the very first question I asked you is, how do you think about training men versus women, and you laid out a lot of stuff to think about. I just want to double tap on them if I can. One, relating to recovery.

Dr. Andy Galpin

And so I'll ask this from the scientific perspective, as well as, and potentially even more important, your years of experience. So what do we understand about men versus women, the context of strength training here, regarding things like recovery? Have you truly seen that women recover more than men on general? Do they need more volume? Those are two separate questions. And then a third one I'll smuggle in here is, are there any other things physiologically, like menstrual cycle phase or things like that, that you have found to either be big considerations or things you put a lot of effort into and then panned out to not really matter too much?

Dr. Bret Contreras

Awesome. Yes, and yes.

Dr. Bret Contreras

But also, it could be that the women are on a permanent specialization program.

Dr. Andy Galpin

Oh.

Dr. Bret Contreras

Glutes. Booty by Bret is a glute specialization plan.

Dr. Andy Galpin

Not a glute only, but it's a specialization plan.

Dr. Bret Contreras

It's full body with-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... we hit quads, adductors, and hammies, but we don't do a ton of leg extensions, seated hip adductions, or leg curls. Because that would just take away from what you could potentially recover from with the glutes. You can't just hit every muscle. What if you trained every muscle like you did with Booty by Bret, where you did 36 to 45 sets a week of glutes, with quads, with hammies, with adductors, calves. It's too much. You could never recover. So maybe they, I just think they can recover better because they're on a glute specialization-

Dr. Andy Galpin

I see

Dr. Bret Contreras

... program. Because they have reduced volume of the upper body muscles and even the quads and hammies.

Dr. Andy Galpin

And even intentionally, as you said earlier, built in a day that is a more recoverable day.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

So the exercise selection by default is easier to recover from.

Dr. Bret Contreras

So-

Dr. Andy Galpin

Makes sense

Dr. Bret Contreras

... yeah, so-

Dr. Andy Galpin

I buy that

Dr. Bret Contreras

... but I don't think it's just that. Early on in my training career, I'm like, "Man, these women can do these workouts." I tried to do one once, 2007. Tried to do what I give my girls. I was on the ground laying there for a half an hour. I was like, "Is it possible to have a heart attack at-"

Dr. Andy Galpin

28 or-

Dr. Bret Contreras

... it was 31 or two or something. And I remember just sitting there like, wow, that made me gain respect for what I put them through. So, it could be the influence of hormones and estrogen, and they have bigger type 1 fiber hypertrophy. They have higher estrogen. Maybe that leads to better muscle damage repair. If you put a guy through the workouts they do, it kills them. But the girls can bounce back quicker. I know there was a study I read back in the day on bench press. Guys, it would take them two or three days to get back, say they did a one-rep max, or it took them two days to repeat that. The women could repeat that the next day. And you could say, well, that's because they're not as strong, relatively. But with women, they are as strong with a lot of these glute exercises-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... as men, relatively.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

They're stronger. Relatively, women are stronger at hip thrusts than men. And again, you could say-

Dr. Andy Galpin

Almost absolutely, in some cases, yeah

Dr. Bret Contreras

... you could, yeah, almost absolutely as well. And you could say, well, that's just because they

do it a lot, too, but I think there might be something with anatomy. But anyway, I think they can do more volume. I think they can recover slightly quicker, so their programs can be a little more-

Dr. Andy Galpin

Do you think they need more volume? In other words, would they have the same effect if they were given the same amount of volume?

Dr. Bret Contreras

When I train, okay. Do they need more volume?

Dr. Bret Contreras

I think the better question is, is there a different optimal volume for them for hypertrophy? I do think it would be slightly shifted upwards for women compared to men, but not double. It might be that for men, hypothetically speaking, say 12 sets was optimal for a muscle group for a man, whereas maybe it would be 16 for a woman. But also, we talked about earlier, it depends.

Dr. Andy Galpin

Mm-hmm.

Dr. Bret Contreras

Every answer is it depends. You have the people who can recover better than others, and who push themselves harder, too.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

You have the people who, there's also some weird thing about tempo. You have those people who on chin-ups, they're like , and you're like, "Okay, they're done." Somehow-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... they do another rep.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And you're like, and then they get three more.

Dr. Andy Galpin

16 more. Yeah .

Dr. Bret Contreras

And you're like, "What?" Because people always go, "Wow, you had three more in the tank." And I'm like, "No, I wouldn't have gotten one more. It just looks like that," because I'm a very explosive lifter.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

I either explode up or it won't go up at all. But anyway-

Dr. Andy Galpin

I'm the same as you, for the record

Dr. Bret Contreras

... some of those people-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... I think the more grinder you are, that's tough to recover. Those are harder to recover from.

Dr. Bret Contreras

But anyway, there's a lot of factors at play, but it's how hard you push yourself versus your muscle damage and recovery genetics.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

So I do think they can do a little more volume and a little more, what's optimal volume and frequency for them is slightly higher. They don't seem to get as damaged and beat down. They seem to get beat down from trying to juggle too many forms of exercise, too many things.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

They tend to want to jam-pack their schedule, and they're like, I don't know if men are-- I'd be curious to see if modern-day men are like that, because me, I'm like, I don't want to plan as many things. You know?

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

But anyway, I think that adds to their stress. But if they had no stress in their lives in that way, they could recover even better. And their relationship stress.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

They care so much about their relationships, it really weighs on them. So anyway, there are a lot of different factors, and I'm probably going to get some stuff for that comment, because whenever you say there are differences between men and women, you get in trouble. And I'm like, "Man, I could never raise a kid, not on my own like a woman can." I could never do half the stuff they can do. And multitasking, they seem to be better at. I have so much respect for a lot of my women. I could not do what they do. I could never do it. Life is so hard, and then you add a kid to the mix, and then you add two kids, and you're breastfeeding and you're getting woken up at night. I don't know how the hell they do it.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So I have the utmost respect, but I think there are definite differences, and we shouldn't try to be the same. As with regards to training, the biggest differences are goal-related.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

The physiological differences, I think, are worth mentioning, like you said. I think they recover faster, can handle a little more volume. And then you said the third piece was-

Dr. Andy Galpin

Menstrual cycle

Dr. Bret Contreras

... the menstrual cycle.

Dr. Andy Galpin

Do you guys train differently during different phases of the cycle?

Dr. Bret Contreras

So this research got popular, and then Lauren Collento Simple came around and just squashed it. I love it because I was like, "You're going to get women-"

Dr. Andy Galpin

She was in my lab, you know that?

Dr. Bret Contreras

Yeah. She's great.

Dr. Andy Galpin

She's awesome.

Dr. Bret Contreras

Yeah.

Dr. Bret Contreras

But here's the deal.

Dr. Bret Contreras

On average, strength doesn't fluctuate that much throughout the menstrual cycle, et cetera, but does on the individual level, just what you talked about with the trap bar deadlifts. I have women that are, especially if they're not on birth control, and it's crazy, because a lot of women, the day their period starts, they're weakest, but some are their strongest at that point. And I'd be like, I had this client, Camille, in Phoenix, and I'd be like, "Did you start your period today?" And then she's like, "How'd you know?" I go, "Because you just crushed your deadlift PR." Every time she would start her period, she was a monster. Other women don't even want to train when they start-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... especially hip thrust. They don't want pressure on their-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... abducing. You got to know these things. You have to be aware of them and be sympathetic to it, because everyone's different. Some are stronger, some are weaker. Some don't want to be there. They don't want to train. So you bargain with them. You say, "Oh, you start your period. You don't want to hip thrust. Don't hip thrust. Let's do kickbacks. Let's do this." Give them stuff

that doesn't feel bad, so at least they make it in the gym-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... and they feel good about themselves. But yeah, these are factors that men don't have in their lives and don't have to think about. It's an additional variable with women, and it definitely matters on the individual level because some women get so nauseous, so irritable. We don't have to deal with that. That is a factor that should be considered in your program design. But just on a-

Dr. Andy Galpin

Personal coaching level, not a group level

Dr. Bret Contreras

... on a personal level, not a group level. I don't change my programs to reflect that. But in person-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... I definitely change things up. If the person has really bad periods or period cramps and emotions associated with it, you absolutely have to change things up.

Dr. Andy Galpin

Yeah. So a factor to pay attention to, but perhaps no set rules that-

Dr. Bret Contreras

Yes

Dr. Andy Galpin

... should be automatic based on generic cycle phases and length and things like that. Yeah.

Dr. Bret Contreras

You look at the, I wonder if-

Dr. Andy Galpin

I think Lauren's research would agree with that.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

For the most part.

Dr. Bret Contreras

But I wonder if hormones changed are unique, because you look at the graph and it's like-

Dr. Andy Galpin

Oh, they are

Dr. Bret Contreras

... here's testosterone, here's estrogen, here's progesterone, and then you look at pre-menstrual, of course, progesterone is highest, I think, and then estrogen, testosterone are lowest. Of course, it makes sense that that you'd be your weakest there, but it doesn't on a group level.

Dr. Andy Galpin

Well, yeah.

Dr. Bret Contreras

But maybe hormones are different depending on the person, too.

Dr. Andy Galpin

They are. That's the thing.

Dr. Bret Contreras

I also will tell you that my girls, my San Diego squad is all natural.

Dr. Bret Contreras

My Florida squad, most are all natural. But I always tell them, when girls get mad when I say all natural, they'll be like, "They have breast implants." I'm like, "That's not what all natural means." That's not what all natural means in our world. Natty means you don't take gear. You don't take anabolic steroids.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

You don't take SARMS. You don't take peptides. I don't even think peptides really are a factor now.

Dr. Andy Galpin

Depending on what peptide you're talking about.

Dr. Bret Contreras

Yeah, which peptide.

Dr. Andy Galpin
Growth hormone.

Dr. Bret Contreras
That's right.

Dr. Andy Galpin
Yeah. Right.

Dr. Bret Contreras
So I'm so close with these ladies. I've been training them for seven years in groups. When you train women in groups, it's like I'm the gay friend, but I'm not gay. That's how I get treated.

Dr. Andy Galpin
Right.

Dr. Bret Contreras
They will talk about anything.

Dr. Andy Galpin
You're the inside. Yeah.

Dr. Bret Contreras
They will talk about anything in front of me because they're very comfortable. So I hear everything. And they'll be like, "Coach, my testosterone levels came back. It's at 14." And then I'm like, "Okay. You're super horny. That's all you talk about is sex, and you're strong as hell. You can deadlift 385. You think you have a 14 testosterone level? Check it again."

Dr. Andy Galpin
Yeah.

Dr. Bret Contreras
But enough of them came back I swear, my average testosterone level of my clients is not even 20. It's probably in the teens. How? They're strong as hell. I start to wonder if really intense training lowers women's testosterone levels, because normal is 6 to 90 for women. That's a 15-fold difference.

Dr. Andy Galpin
Yeah.

Dr. Bret Contreras
But you'd think some of these girls, they have these amazing physiques. Can I get someone in the 40s or 50s or 60s?

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

No one's at a 90.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

But they're in the teens.

Dr. Andy Galpin

There's a lot of things going on there.

Dr. Bret Contreras

They're in the teens.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So, that's a whole other thing that I would love to look into is, should we be periodizing to let their testosterone come up or anything? Because I'm like, or maybe that they're all just getting false readings because these places are lying to them to try to get them on TRT.

Dr. Andy Galpin

Mm-hmm.

Dr. Bret Contreras

Because I'm in a constant battle saying, "You don't need TRT. Look at you."

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

"You look amazing."

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So, yeah.

Dr. Andy Galpin

Okay. Well, thank you. Those were really good insights. That's a question that comes up a lot, and there's the research on that. That's great. People can interpret that. But it's always interesting to hear a perspective of somebody who's been in the trenches with people, trying to get as strong as they can, trying to grow muscle, and seeing how that played into your coaching, and I think that was a very helpful answer. And I know a lot of coaches and a lot of individual people are going to go, "Okay, great. Now I have freedom to-

Dr. Bret Contreras

Yes

Dr. Andy Galpin

... take the best option for me, depending on where I'm at."

Dr. Andy Galpin

One last real technical question here, and then I got a couple more. But the technical one is regarding the glutes versus other muscles. Right? You've mentioned this several times now, but I want to make sure this was really clear, because I thought it was really helpful. We talk about training as if all of our muscles respond to training the exact same way. Right? And so, this much intensity, this much load, this much frequency, this is how you progress. But have there been any themes over your career that you've noticed about the glutes as a collective musculature, that are significantly different than the delts or the triceps or the pec, or anything like that? Anything that jump out of either maybe things to do or things not to do that's special about the glutes?

Dr. Bret Contreras

I just think they're more simple. A lot of muscles are simpler.

Dr. Bret Contreras

Because, well, what I like is comparing the glutes to the delts.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

They're both ball and socket joints. Lot of movement, lot of range of motion around them. But delts, you have three subdivisions.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Anterior, middle, and lateral, and you really target one division over the other. So, when you talk about delt volume, when you train any upper body pressing movement, be it dips, decline, flat,

push-ups, bench, incline, shoulder press, behind the neck press, every one of them will train the anterior delts. And then expanding out in the frontal plane more, is going to activate the middle delts a lot, the side delts. But rear delts don't get super high on pressing.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

But then the rear delts do get activated during all the pulling motions.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

From pull-downs to angled pull-downs to rows, to even rows more upright.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So, the rear delts will get activated with a lot of pulling movements. So, they can handle a lot of volume because you can also add in isolation movements. But if you wanted to, you could do three sets of rear delt raises three times a week, if you really wanted to.

Dr. Andy Galpin

Sure.

Dr. Bret Contreras

You could do three sets of laterals three times a week with variety. You could do three sets of front raises three times a week, and you could be doing presses and pulls. So, they can handle a lot of volume, the delts can. But they do shoulder flexion, abduction, and then shoulder extension in different planes, too, and different angles and stuff. So, they're a very versatile muscle group. When you look at the glutes, it's the glute max, the glute med, the glute min, and they carry out hip extension, abduction, extra rotation, posterior pelvic tilt. But also, posterior pelvic tilt should just be thought of as short-arc hip hyperextension. But anyway, you can bend over and do abduction in the transverse, like being knees to chest abduction versus upright, versus leaning back, like frontal plane. So, they do several different joint actions, and then you can vary the exercises to work more in the stretch position to stretch you more, to work the stretch more, to squeeze you more, to have more hip hyperextension, to work more in the stretch position.

Dr. Bret Contreras

It's complicated, but it's just how complicated you want to make it. It's like, for glutes, okay, just get really strong at Bulgarians, Romanians, and hip thrusts-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... and you're going to have pretty good glute max development. And then throw in some abduct. Do some lateral band walks three times a week to warm up, and you'll be fine. But no, there's more to it. Okay, well, let's think of other muscles. Quads. Well, it's so simple. It's pretty much just the knee is a hinge joint. All right. Just get really strong at either any one of these or a variety of them, but I would say they all probably build the quads very effectively. The first is squats, and probably high bar even better, heel elevated even better, front squats, high bar squats, whatever. But get strong at squats, you're probably going to have nice quads. But now add in hack squats-

Dr. Andy Galpin

Mm

Dr. Bret Contreras

...

Dr. Bret Contreras

or the pendulum squat or belt squats or leg press in a quad-dominant fashion. How can you not have big vastys? But what about the rec fem? It's a two-joint muscle. If you want to maximize rec fem development Now you need to add in a leg extension-type movement, a single joint. Well, so you added leg extensions, but leg extensions are even better when you lean back. They're probably even better when you stress the stretched position. That's on that prime machine-

Dr. Andy Galpin

Mm-hmm

Dr. Bret Contreras

... that really you can-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... change the load.

Dr. Andy Galpin

That's great.

Dr. Bret Contreras

If you have a plate-loaded that's just pure plate, like the Titan-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... then you're only working the squeeze. I actually like to do that because I'm like, "Everything we do works the stretched position." I like working the squeeze position. But anyway, you could also do sissy squats, or you could do reverse Nordics.

Dr. Bret Contreras

And maybe you need to do some hip flexion, too, to maximize rec fem growth. But it's not quite as complicated as the glutes.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Hamstrings can be complicated because there's a lot of studies. Hamstrings, there's a ton of research on because of hamstring strain injuries.

Dr. Andy Galpin

Yeah, injuries, right.

Dr. Bret Contreras

And these range from EMG to-

Dr. Andy Galpin

It's my favorite-

Dr. Bret Contreras

... functional MRI

Dr. Andy Galpin

... muscle, for the record, and it is the one I think people train the least and should train more.

Dr. Bret Contreras

Yes, because-

Dr. Andy Galpin

Completely underrated

Dr. Bret Contreras

... foot position, like with leg extensions, doesn't seem to alter vasti-

Dr. Andy Galpin

No

Dr. Bret Contreras

... recruitment, but it does for hamstrings.

Dr. Andy Galpin

Boy, knee pain and other foot injuries and back injuries, man, hamstrings.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

People just don't train them.

Dr. Bret Contreras

So you have knee flexion movements, and you have hip extension-

Dr. Andy Galpin

Extension

Dr. Bret Contreras

... movements. With hip extension, you could go squeeze position with back extensions, like loaded-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... 45s and back extensions. And you can go, in knee flexion, you can work them in a stretch with seated hamstrings. So with-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... seated hamstring curls, you should be leaning forward if possible, or just at least as upright as possible. Don't be leaning back.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

You want as much stretch, but also make sure that pad is down far, and you make sure it's working you all the way up into full knee extension-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... so you're getting the maximum stretch.

Dr. Bret Contreras

But then you can do lying leg curls, kneeling leg curls, and they all seem to work different, maybe slightly different areas.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Variation is a good thing for hammies. Okay, calves. Calves are probably the simplest exercise to train, because what we're finding is seated calf raises don't appear to add to the mix, and neither does the squeeze position.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

There are now a few studies showing that calves almost don't even need to come up all the way. You can just do the stretch position. But if you do come up all the way, extend the set with some lengthened partials-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... or just do more sets. But yeah, if you just want to do a quick three sets of calf raises, just do standing. You don't need to do seated. That tends to-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... it just seems to build the soleus just the same. And-

Dr. Andy Galpin

Yeah, but the seated's going to make it hard for your gastroc to get involved at all. It's going to basically be zero, right, on the seated, the calf raise.

Dr. Bret Contreras

Yeah, so seated has been shown to not-- It doesn't add to the equation when you're doing-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... straight-legged. I don't think I've seen a study on donkey calf raises that add. I don't think it does. There is some evidence that turning the toes in versus out can help.

Dr. Andy Galpin

Sure.

Dr. Bret Contreras

But yeah. Basically, the calves are probably the simplest muscle to train because just do standing calf raises, work the stretch position, you're good to go. Can the calves handle the-- Do you need the variety in calves-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... that you can with glutes?

Dr. Bret Contreras

Pretty much they just do plantar flexion-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... so you don't really need-- And then you look at the pecs. Okay, there's the upper, middle, and lower fibers. If you just get strong at low incline press, you probably get most of your bang for your buck.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

But then you're like, "Okay, should I work all the angles? Should I do weighted dips? Should I do

incline press? What incline? Should I vary the incline? Should I do 15, 30, 45, 60, 75, 90?"
Obviously not 90.

Dr. Andy Galpin
Degrees, yeah.

Dr. Bret Contreras
Then 90 degrees-

Dr. Andy Galpin
Yeah

Dr. Bret Contreras
... would be mostly all front delts.

Dr. Andy Galpin
Right.

Dr. Bret Contreras
But what about now your pec isolation movements, okay? Should you do flies or pec deck or cable crossovers? Should you just focus on the stretch and just do dumbbell flies? Do you need to come up all the way? Why? You lose tension. Just do lengthened partials. Okay.

Dr. Andy Galpin
Right.

Dr. Bret Contreras
Well, so flies, do you need the squeeze? Should you do crossovers, focus on the squeeze? Pec deck-

Dr. Andy Galpin
Mm-hmm

Dr. Bret Contreras
... where you really focus on, we don't have enough research, but to me, it just makes sense.

Dr. Andy Galpin
Yep.

Dr. Bret Contreras
It just makes sense to be strong throughout a full range of motion and to incorporate a lot of variety, but it's like the more divergent the muscle, the bigger the muscle and more subdivisions, and the more joint actions, the more complicated it becomes. Lats, does the stretch help a lot? They have better moment arms, coming up all the way. How do you stretch the lats the most?

How do you stretch the pecs the most? This scientist named Kazam came out and said you stretch the pecs more with a 45-degree arm angle.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

All right. But what about when I do guillotine, because you can lower the bar, I feel some of the fibers, upper fibers, stretching more that way.

Dr. Andy Galpin

Mm-hmm.

Dr. Bret Contreras

Should we be doing guillotine work? That doesn't agree with some people's shoulders.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

And it's like, what about the lats? Okay, how do you stretch the lats the most? Kazam would say do a cross-arm-

Dr. Andy Galpin

Cross body, yep

Dr. Bret Contreras

... cross body motion. That might stretch the lats the most.

Dr. Andy Galpin

Mm-hmm.

Dr. Bret Contreras

Arguably so, but sometimes you can have, if you're big muscles, you might not get the full stretch, or your anatomy might, your rib cage, or for me, I can't seem to get over that much on these.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

But would it stretch my lats the most? And then you start altering your- ... your spinal and your scapula and stuff and all that, and you can get a better stretch. And I think this stuff is very important.

Dr. Andy Galpin

Mm-hmm.

Dr. Bret Contreras

We should talk about it, for what's optimal or not. What happens is everyone starts focusing on optimal, and then the pendulum goes too far this way, and you have these nerds ripping on bent-over rows and weighted chin-ups and stuff. And I like it because it's funny, because interestingly, I contradict myself. I've always liked sumo for glutes compared to conventional, but I've always liked supinated narrow for lats compared to wide grip.

Dr. Andy Galpin

Oh, yeah.

Dr. Bret Contreras

And it's like, but I'm not consistent-

Dr. Andy Galpin

No

Dr. Bret Contreras

... because I'll say, "Well, supinated stretch you more, but wide grip activates a little bit more."

Dr. Andy Galpin

Then why don't you do sumos?

Dr. Bret Contreras

But in my opinion, for lats, you should probably do some stuff in the frontal plane-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... some stuff more in the sagittal plane, some stuff that goes full overhead in the full stretch, even though the lats don't-

Dr. Andy Galpin

Mm-hmm

Dr. Bret Contreras

... have good moment arms or activate here that much. You should just always use a variety. You have some muscles, because see with the lats, you've got different divisions.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Upper, middle, lower, and how do you maximize the size of each? And it's like, I like analyzing everything, geeking out on the biomechanics. Just don't let it take away from-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... the basics and getting strong at the basics because yeah, if you look at the way Tom Platz trained his quads, he was an animal.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

He got super strong at squats and hack squats. He'd go, he'd turn the hack squat into a sissy squat.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And these leg extension, you're seeing him flying up on these leg extensions, screaming, and he'd go until, he was doing lengthened super sets 30 years ago-

Dr. Andy Galpin

Mm

Dr. Bret Contreras

... before they were a thing-

Dr. Andy Galpin

Mm-hmm

Dr. Bret Contreras

... before they were popular. It's that intensity. But yeah, he had the greatest quad development of all time.

Dr. Andy Galpin

Yeah. They're absurd.

Dr. Bret Contreras

And that was before they were even. Now you see since then, tell me a body part that's bigger on a guy 30 years ago than-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... today. Only Platz with his legs, his quads.

Dr. Andy Galpin

Yep. That's it. Okay, awesome. That was really, really helpful. Last thing I want to get from you here is, I was telling you this before we started. You're a unicorn in the field for many reasons. One of which is I think you're one of the very few people who I really respect and enjoy who has actually built themselves, it's not fair, but mostly on a single brand. So this is your company names, this is your exercise equipment, your Instagram, your social media is the glute guy. Despite the fact you have a PhD and you've done all the things we talked about earlier, you've pushed into a single brand. And why that matters is how do you handle that then when research comes out, and it says your brand maybe isn't great?

Dr. Bret Contreras

Right.

Dr. Andy Galpin

So in other words, what I'm saying is if you were to be the lemon juice guy, and then all of a sudden research comes out and says, "Hey, lemon juice is actually not great for you." And like, "Oh my God," what do you do? Your career. This has happened many times in your career. There have been many studies come out that, as you talked about earlier, have countered maybe what you've thought before. And I think you've done such a beautiful job over the years of being so overt, so honest with that. You were the first guy I hear about when new studies come out on the hip thrust that show negative results. Not because you're criticizing the study. If that is true of the study, you'll bring that up, but rarely do you do that. Almost always it is a, "Hey, guys. Updating our thinking here. Turns out I had this idea, it doesn't work anymore. Now it looks like that's not the case, and this is sort of how we're modifying it."

Dr. Andy Galpin

So, the question that I'm eventually smuggling in here is, how have you handled that? How do you think about that? And then secondarily, what are the most known criticisms of the hip thrust? What has been shown scientifically? What is it not good at? What is it limited in? What are the downsides? Because I don't want this entire discussion to feel like just a big glutes-

Dr. Bret Contreras

Hip thrust party

Dr. Andy Galpin

... is great, hip thrusts are great.

Dr. Andy Galpin

And I don't mind bringing this up because you have done this more than anybody in your career about what looks like sabotaging your own brand. But to me, it's only elevated you even more because when you do say things that are positive about the hip thrust, I feel like you generally give a fair representation of literature, and you don't run away from when things don't support your brand. So, what do we know about the downside? There's no really cons. There's no negatives of a hip thrust. But what are the limitations?

Dr. Bret Contreras

Limitations.

Dr. Andy Galpin

What are they not good at? When is it not the best choice? And then how have you handled that when that's happened in your career and saving your brand? If that's probably not a word that resonates with you, but you know what I mean.

Dr. Bret Contreras

Yeah. Great questions. If I was the hip thrust guy, yes, I'm the guy who popularized it. If I was the hip thrust guy, I'd be screwed because-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... well, I don't know. If we had enough studies, you're going to find it's useful for some things-

Dr. Andy Galpin

Some things, sure

Dr. Bret Contreras

... but it's not, yeah. Then I'd be like, "Oh, God, I said this." But being the glute guy, I just need to flow with the research, and what I want to do is be the first to notify my people of a study. So if no one will care, and I want to fund this, I want to carry out the studies, because then I'm the hero either way.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

If I do a study on full squats versus parallel squats and-

Dr. Andy Galpin

For glute development

Dr. Bret Contreras

... for glute development and full squats wins, all the Olympic weightlifters are like, "Hooray! Contreras saves the day." And then if it's to parallel, the powerlifters get to say, "See? Suck it, Olympic lifters. We told you."

Dr. Bret Contreras

But the Plotkin study, Menno Henselmans and I funded that.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

80 freaking grand we spent of our own money, like 40 grand each. Props to Menno. Because we wanted-

Dr. Andy Galpin

He's funded stuff in our lab, too. He's great.

Dr. Bret Contreras

Yeah. We wanted MRI, because we don't fully trust ultrasound for glutes. For other muscles, yeah, but glutes, it's tricky. So anyway, I was so glad that I got to present that and helped to be involved in that, because it was a needed study, and I was wrong. Now, the first time what you're talking about with hip thrust was speed development. So, the first study on the topic was from my PhD thesis. It looked at adolescent male rugby players, and it showed that front squats led to greater vertical jumps, but hip thrust led to better acceleration improvements in sprinting, and that was in line with the force vector hypothesis.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

You want to jump higher, put more force in the ground that way. You want to run faster, put more force in the ground that way. It's common sense. And then you see this in the research, kind of like you see boom, and then boom, and then with hip thrust, it went back again to here. So, the first study showed great results. So then a couple of researchers designed studies. Here's the deal. One-

Dr. Andy Galpin

I know you got hammered on the force vector theory eventually

Dr. Bret Contreras

I got hammered on it, and now it's legit. Now it's-

Dr. Andy Galpin

It's back

Dr. Bret Contreras

... yeah, it's back.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So, the next couple of researchers who study, I've got to look back at these papers. Chris Bishop was one of them.

Dr. Andy Galpin

Mm-hmm.

Dr. Bret Contreras

And there was one, a Chinese or Japanese baseball study.

Dr. Bret Contreras

Wei, I think, was the last name. But anyway, that baseball study showed that hip thrust grew the baseball players' squat strength just as effectively as squats did, and that's what I found in one of my... I did a twin study.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

And the hip thrust twin grew her squat. Went from a 95-pound squat to a 135-pound squat without squatting, just in six weeks of hip thrusting, and it was crazy. And it cleaned up her form, too. She hip thr- But you look at those couple of studies. I want to look back at two things. I don't know why I don't know this. Number one, their tempo. If they're doing a two-second up and four-second down, that is the slowest hip thrust known to man.

Dr. Andy Galpin

Mm.

Dr. Bret Contreras

This is one of the biggest things people are wrong about in the industry is that tempo matters so much for hypertrophy. It doesn't. Look at a lot of these bodybuilders. They're heaving away. They're using momentum. They're exploding, because intuitively they know. A lot of them were doing length and partials, too, just doing bottom position stuff. They're sometimes ahead of the curve. Sometimes they're dead wrong.

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

But sometimes the bros had it right. Anyway, these people out there, and they will swear by it. They think that the slower the tempo, the better it is for muscle growth. And a review paper by Schoenfeld and Krieger, I think, showed two to eight seconds led to the same muscle growth. But I'm telling you-

Dr. Andy Galpin

I think it's more than that, by the way.

Dr. Bret Contreras

It-

Dr. Andy Galpin

I think it's like two to 15. It almost doesn't matter

Dr. Bret Contreras

... I don't know. The only thing is when you have a 10-second concentric, I think there's only one study on the super slow method. I think it was 10 seconds up, five seconds down, and that led to less growth. But you can get-

Dr. Andy Galpin

Oh, yeah

Dr. Bret Contreras

... a variety of results. But also, a new study on cheating momentum. Brad Schoenfeld did this study, too, and they showed with curls, and I don't know if it was triceps, but basically heaving away at curls versus very strict curls, and they had the same biceps growth.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So, the strict people can say, "Ha." This is what I love about presenting the research, because you're the champion. The strict people get to say, "See? You went lighter, used less load, and got the same muscle growth, and it's safer." Clearly, it's going to be safer. You're going to have less injuries. And the heaving crowd can say, "See? You went heavier. You heaved away. You're probably going to grow other muscles, because you're using some front delt and some-"

Dr. Andy Galpin

And connective tissue development-

Dr. Bret Contreras

"... upward." Yeah

Dr. Andy Galpin

... and it's more athletic, and yeah.

Dr. Bret Contreras

Yeah. It's more athletic, and they grew the same biceps. You didn't need to go light and-

Dr. Andy Galpin

Super slow.

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

Train like an athlete, right. I get it.

Dr. Bret Contreras

So, that's what I like about being-

Dr. Andy Galpin

That's funny you said that, because my initial instinct was that, right? Being on more the athletic side generally, I'm like, I know. This whole don't use momentum thing, I've been against for forever, because I'm like, no, move. Learn to move. You'll develop. And it's also fun to move.

Dr. Bret Contreras

And the bodybuilders were heaving-

Dr. Andy Galpin

Yeah, of course

Dr. Bret Contreras

... and using momentum back in the day.

Dr. Andy Galpin

Of course.

Dr. Bret Contreras

Look at Ronnie Coleman. Look at these guys.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And they're not going super slow negatives, and I don't think super slow negatives help with muscle growth either. But you've got to con-

Dr. Andy Galpin

No, but they are very tiring in terms of-

Dr. Bret Contreras

Yeah. Oh, yeah

Dr. Andy Galpin

... they will suck all your recovery reserves out of you.

Dr. Bret Contreras

And I think it's good to do for variety.

Dr. Andy Galpin

Of course.

Dr. Bret Contreras

It's good to do for, maybe it does, some of these things lead to growth initially, but then you just revisit them. But anyway, I think hip thrusts are one rep per second at my gym, maybe one and a half. Say what you want, criticize me all you want, but scoreboard. Let's look at before and after pictures. And I don't mean to be cocky, but-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... I get annoyed when-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... look at my girls' glute development. Do you think we're lacking? And we're doing explosive hip thrusts. Okay, so what I think those initial studies, I got to look at two things. Number one, were they still sprinting? Because if these were athletes and you had them stop sprinting-

Dr. Andy Galpin

For eight weeks, right

Dr. Bret Contreras

... then this is to see if hip thrusts counteract the effects of detraining.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

If they didn't get faster, but they didn't get slower, that's huge.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

You can hip thrust, and while you stop sprinting and retain your sprint speed.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

That would be cool to know.

Dr. Andy Galpin

And speed is, as we know, is the first thing to go.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

So, not sprinting for six weeks, if this is actually the case-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... which it may not be, that would be enormous. You would expect a-

Dr. Bret Contreras

You'd expect losses

Dr. Andy Galpin

... significant loss. Yeah.

Dr. Bret Contreras

But also, if it's a slow tempo, that doesn't have ecological validity, and that's my problem in the research.

Dr. Andy Galpin

Yeah. There's another way of saying that's not how people do it in the real world.

Dr. Bret Contreras

No.

Dr. Andy Galpin

So.

Dr. Bret Contreras

And so, I think maybe some of the other studies that came after that. So then you had a couple studies show that hip thrusts didn't build sprint speed, and that's when I came out with my blog post saying I was wrong. I thought I was ahead of the research. I wasn't. Everyone respected me for that. And now it's years later, now there's actually a lot of evidence that hip thrusts are better than squats. But in general, horizontal exercises seem to be better at developing sprint speed. But this is interesting because the Plotkin study showed similar glute growth, but the squat group had more quad and adductor growth.

Dr. Andy Galpin

Mm.

Dr. Bret Contreras

Twice the quad and over two and a half times, I think, the adductor growth. Neither grew the hamstrings or glute medius, minimus.

Dr. Andy Galpin

Wow.

Dr. Bret Contreras

So, you can't tell me in sports, quads and adductors aren't important. So I would never say stop squatting because you need quads, you need adductors, you need glutes, but you do need strength through a full range of motion. And squats probably get you more glute strength in the hips flexed position, hip thrust in the hips extended position. But there's something about explosive movements. And there's even a study showing that bands might be more effective than free weights because you explode up.

Dr. Andy Galpin

Mm-hmm.

Dr. Bret Contreras

So, I think we need to look more into, I have a few different glute-- In the first room in Glute Lab Fort Lauderdale is our hip thrust room. But I have in there a kneeling, the Glute Builder has a kneeling glute isolator. It's kneeling hip extension.

Dr. Andy Galpin

Oh, yeah.

Dr. Bret Contreras

You're bent over, you're kneeling, and you do back extension. It's like Sorinex's Back Attack machine-

Dr. Andy Galpin

Mm-hmm

Dr. Bret Contreras

... but kneeling, okay? And then you have the reverse glute ham. That's a Rogers piece, where you're laying on your back and there's a pad and it almost looks like a leg curl pad, but you move it in hip extension the whole way. Well, when I do 20-rep set of hip thrusts versus the kneeling glute isolate versus the reverse glute ham, a 20-rep set will take not even 30 seconds with the hip thrusts. It might be 25 seconds. A-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... kneeling glute isolator might be 30, 35, and the reverse glute ham will be 40 to 60. Well, it'll-

Dr. Andy Galpin

It's two minutes

Dr. Bret Contreras

... actually be like 60 seconds.

Dr. Andy Galpin

Yeah. It's a long time.

Dr. Bret Contreras

And so these-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... people talk about tempo, and they don't consider the range of motion. So how to tell me you don't know about weight training without telling me you don't know about weight training, is mention that all exercises need the same tempo.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

What do people do with calf raises? What about shrugs? Am I supposed to do shrugs with two seconds up, four seconds down? No. Shrugs are one second. You don't need to... So anyway, I think that helps with athleticism is these rapid, like with hip thrust, boom. Explode up. They don't beat you up as much. They don't cause much muscle damage. They're explosive concentrics. You don't have to control the negative, and you can say the negative is huge. Is it for acceleration? When you're-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... leaning forward accelerating, it's pure concentric. There's not an eccentric phase with acceleration sprinting. I think concentric is king, and I think you need to power through the whole stride-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... and that's why hip thrusts are great. So-

Dr. Andy Galpin

You're also not saying it's the only exercise to do.

Dr. Bret Contreras

No. Hell no. You look at what-

Dr. Andy Galpin

Just like one

Dr. Bret Contreras

... you look at what-

Dr. Andy Galpin

Of the many

Dr. Bret Contreras

... what the popular sprint coaches have always drawn. What is USATF or whatever, the track and field-

Dr. Andy Galpin

Mm-hmm

Dr. Bret Contreras

... what have they always done? Vertical, Olympic squats, RDLs, Olympic lifts.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

But Charlie Francis was throwing in the reverse leg press.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

That's a kickback.

Dr. Andy Galpin

Mm-hmm.

Dr. Bret Contreras

And, so add in some hip thrusts, but just make sure you're not overdoing the strength training, because I would become the coach and I would over prioritize strength that I'd actually make them slower.

Dr. Andy Galpin

Get them all slower.

Dr. Bret Contreras

I'd make them slower.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Because I'd be obsessed with getting them stronger at these exercises-

Dr. Andy Galpin

Yeah. Right

Dr. Bret Contreras

... and really you need to save your juice for the explosive stuff.

Dr. Andy Galpin

Priorities.

Dr. Bret Contreras

The sprinting, the plyos.

Dr. Andy Galpin

Just like you said at the beginning, don't forget the priorities, right?

Dr. Bret Contreras

Yes.

Dr. Andy Galpin

Make sure that the goal is there. You're just saying that potentially you could consider adding horizontal movements, if horizontal speed is-

Dr. Bret Contreras

Is the priority

Dr. Andy Galpin

... is the goal.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

Okay. So the goal-

Dr. Bret Contreras

But real quick. So, that's the first time I had to say I was wrong.

Dr. Andy Galpin

Force vector thing, yeah.

Dr. Bret Contreras

But then I kind of end up being right. Anyway, I need to update that.

Dr. Andy Galpin

Not a good start to your own criticisms here, but okay.

Dr. Bret Contreras

I need to update that. Then later on, with that hip thrust versus squat study, I thought for sure hip thrusts were going to win. And this is what annoyed me.

Dr. Andy Galpin

Win in terms of bigger growth?

Dr. Bret Contreras

I made a post, beat out squats for glute growth.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

They tied.

Dr. Bret Contreras

They tied for upper, middle, and lower glute max. And so then it leads to the next hypothesis. Well, we equated volume. You don't have to equate volume in the real world. You can handle more volume. What if we would've done more volume? Blah, blah, blah. We need more studies. But I was wrong because I thought hip thrusts would beat squats and they tied. It was on beginners. Beginners seem to have more stretch-related growth due to sarcomere genesis, which tends to stop at around, say six, eight weeks, whatever. But, I did make a post saying I was wrong. Well, why didn't all the other guys make posts saying they were wrong, too? Because they all thought squats would annihilate-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... hip thrusts.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

I thought hip thrusts would beat out squats. We were all wrong, but I was the only one to say it.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

So anyway, that's the secret. To answer your question, how do you pivot, I guess, as new research comes out? You be the first to announce it, and then you change your programming to reflect that. You learn and you evolve. And that's the secret. No one's mad at you. In fact, they trust you more. But it's really hard for guys to do. It is so hard for guys to say, "I was wrong." It's okay for guys to admit they were wrong five years later. "Oh, back in the day, we used to think that squats-"

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... grew your arms because we'd say do squats and it raises your testosterone, growth hormone. Your arms are going to get jacked, and now we know that's not true."

Dr. Andy Galpin

This is a real thing, what you're saying, by the way.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

That's a real example.

Dr. Bret Contreras

Now we know that's not true.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

The hormone hypothesis, it was probably smart. I like that we told people that, but we were wrong.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

But yeah, we got them to squat and deadlift by pretending it was going to build your arms.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Now, guys-

Dr. Andy Galpin

I used to say that all the time

Dr. Bret Contreras

... I used to say it, too. I came across a document I give out to my first gym, and it was like-

Dr. Andy Galpin

Oh

Dr. Bret Contreras

... so pseudoscientific. It was Yeah.

Dr. Andy Galpin

Oh, it must be great

Dr. Bret Contreras

... it was full of pseudoscience. But anyway, it's fine for guys to admit they were wrong five years later, 10 years later, but at the time, it's hard to say, "Guys, this study just came out. Looks like I was wrong." I've been telling people that. And you can say, "Okay, I'd still like to see it in advanced lifters. I would still like to see it." But it looks like-

Dr. Andy Galpin

Longer duration

Dr. Bret Contreras

... if you say-

Dr. Andy Galpin

Blah, blah, blah. Yeah

Dr. Bret Contreras

... front squats suck because you're not building quads, you're just limited by upper body. Your quads could keep going, but you cave, and you fall. And then, a study comes out saying front squats lead to the same quad growth as back squats. You should tell your people. If you're a scientist, you tell your people. If you're a zealot, you don't mention that study. You pretend it never existed. If you say hip thrusts suck, and a study comes out showing hip thrusts tied squats, you need to come out to your people and say, "Eh, looks like I was wrong. There might be more to hip thrusts."

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

But either way, you should be saying we should do both. I still think squats are better than hip thrusts for glute growth, or I still think hip thrusts are better than squats, but as of now, we should probably be doing both, especially since they kind of combine to form comprehensive glute strength through a full range of motion, full-spectrum glute strength, and especially because they don't beat each other up. One doesn't beat you up as more. One's more full body, grows the quads and adductors, too. One is more isolation. And guys will look you straight in the

face and say, "Don't do any glute isolation work." And I wish women could say, "Oh, I shouldn't do hip thrusts?" "No." "I shouldn't do kickbacks?" "No." "I shouldn't do abduction?" "No." "Well, what do you do for your chest? Do you just do bench? Oh, you do pec dec, too? What do you do for your arms? Do you do curls? Because you could just grow them doing chin-ups and close-grip bench.

Dr. Bret Contreras

You do curls and tricep extensions? Oh, what about your side delts? Do you do lateral raises? Because you could just say just do military press out to the sides. Oh, you don't even believe. So you're giving me advice you don't follow yourself, you weird hypocrite. Do you not realize that, you weird man?" I don't know why guys do that with glutes. But anyway, that's how you navigate that throughout your career, is you be the first to announce it to your people. You admit it, and then they just like you more, because they go, "This guy's always going to update us. This guy's always going to give us the science." And then, if you disagree with it, fund your own study and look into it. You'll just learn. All we can do is learn and grow from it. And then, if you're the first person to point out that hip thrusts were not needed, and I could pivot, I'm still the glute guy. I just said, "Hey, turns out we didn't need to do squats.

Dr. Bret Contreras

We just needed to throw electrodes on your glutes."

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

Then I'd be the hero because people would be, "We didn't need exercises," but I don't believe that.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And then, the second part to your question was, what are the pitfalls with hip thrusts? I do believe when you're an expert on a topic, I could be the number one. I could write the best article to convince you that hip thrusts are amazing, but I could also write the most convincing article to say that they're worthless. I should know both sides of the argument. I should know it better than anyone. So, people will say, "Takes forever to set up."

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

"It's a pain in the butt to set up." How did we all used to set up these stations back in the day? If I go to a gym, I don't want to set up the station.

Dr. Andy Galpin

Yeah. It is the number one reason I don't do it.

Dr. Bret Contreras

Yes.

Dr. Andy Galpin

Literally the number one reason. I'm like, "Oh, God."

Dr. Bret Contreras

But if you have a plate-loaded device-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... if you've got the Hammer Strength, the BC Strength, the Nautilus Glute Drive, the Booty Builder-

Dr. Andy Galpin

These are all different hip thrust machines

Dr. Bret Contreras

... yeah.

Dr. Andy Galpin

One of them is yours.

Dr. Bret Contreras

If you've got a Smith machine, even-

Dr. Andy Galpin

Of course, yeah

Dr. Bret Contreras

... with a bench nearby it, because sometimes they put the bench-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... right near the-- Or sometimes, some gyms are putting benches right by their platforms, so people can quickly. And it also matters how strong you are. If there's a bar with one-- At my gym, it's so easy because I got the BC Strength Thruster setups. There's bigger plates. The bar is sitting there loaded with 135. You want to add on plates, we got plates with handles on them. So, you slide them on.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

You got the glute lift there to connect it if you want to do bar plus band. You got the pad on the bar.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

You have even an air expender to sit on if you're shorter, and it's all right there. It makes it so much easier.

Dr. Andy Galpin

I don't know if people realize what you said a second ago, but your company, you specifically make weight plates that are larger in diameter.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

And the reason you do that is because then it makes it much easier to do hip thrusts with them.

Dr. Bret Contreras

Yeah, you just slide the bar over.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

When you have big legs, and you have standard plates, how are you going to-

Dr. Andy Galpin

And I got to slide myself underneath this giant pain in the ass.

Dr. Bret Contreras

Yeah, it's so hard to-- And then you go to get in position, you're like, "Oh," and it's crushing you, and-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... you have to kind of climb, hip thrust up-

Dr. Andy Galpin

Well, when I saw you came out with those-

Dr. Bret Contreras

... drive your legs back

Dr. Andy Galpin

... I chuckled so hard because I'm like, "Oh my God, of course you would." Of course you would make-

Dr. Bret Contreras

Well, I get my good idea from-

Dr. Andy Galpin

... the first person to change weight plates in 50 years.

Dr. Bret Contreras

No, I got that idea from Mark Bell, came out with his wagon wheels.

Dr. Andy Galpin

Oh.

Dr. Bret Contreras

And so, my coaches at Glute Lab were hip thrusting off of them. And at that time-

Dr. Andy Galpin

God, Mark is the best

Dr. Bret Contreras

... at that time, I was rolling the bar up onto rubber mats, just the two-inch-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... rubber mats that I've got from EliteFTS. We'd roll them over the mats, and I'm like, "The mats aren't necessary if you have plates-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... that are two inches bigger in diameter."

Dr. Andy Galpin

Makes sense.

Dr. Bret Contreras

Or actually, two inches bigger in radius. Sorry. So, yeah.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

We came up with the bigger plates. The hip thrust station is huge. And my girls at Fort Lauderdale, they like the rotisserie station the most. The barbell, the standard, they like the rotating pad the most.

Dr. Andy Galpin

Mm-hmm.

Dr. Bret Contreras

Then it would be the Thruster Pro, which I use the Hammer Strength's model, because only Hammer Strength almost got it perfect. But why did they make this tiny plate peg? You only fit four plates on.

Dr. Andy Galpin

Mm.

Dr. Bret Contreras

I've got girls that are strong, and you get a strong man, they're using six, seven plates. So, I made the plate pegs bigger, and then I made the foot plate bigger to accommodate five-footers. That's something no one does for women. These poor women out there, they finally get a hip thrust, and these gym owners are so-

Dr. Andy Galpin

They can't fit on it

Dr. Bret Contreras

... the gym owners are so bad at- Knowing what the best equipment to buy, and the manufacturers don't even test it on a shorter woman-

Dr. Andy Galpin

Hmm

Dr. Bret Contreras

... who is the market with-

Dr. Andy Galpin

Right. Hip thrust, yeah

Dr. Bret Contreras

... glute machines.

Dr. Andy Galpin

Yep. So outside of the criticism of setting it up and the pain, what would be maybe the next, just-

Dr. Bret Contreras

Hip pain

Dr. Andy Galpin

... hip pain. Oh, like the bar on my hip.

Dr. Bret Contreras

You get super strong-

Dr. Andy Galpin

I bruised the hell out of myself there many times.

Dr. Bret Contreras

Yeah.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

You'd think I of all people would have the best padding. It's hard.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

It's-

Dr. Andy Galpin

Well, I mean, you're still putting, I don't care what kind of polyurethane or whatever-

Dr. Bret Contreras

Yeah

Dr. Andy Galpin

... material you have, foam, you're still gonna put several hundred pounds through that foam.

Dr. Bret Contreras

Yeah. So there's an optimal thickness and density combination that-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... but it's really-

Dr. Andy Galpin

Hard to get

Dr. Bret Contreras

... if you get it thicker, it interferes with your hip flexion.

Dr. Andy Galpin

So outside of setup, and then-

Dr. Bret Contreras

If you get it denser, it doesn't pad as well. If you get it too soft, the bar sinks through. So, the hip pain and the bruises and the scar... And then, in some people, it can get bad.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

My girls will be like, "Look at this." And so sometimes, when you have these crazy bruises, you can either avoid the hip thrust, but sometimes I'll sit on my clients' laps backwards, and you do partner hip thrust. They hip thrust me.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And I'm like, "I weigh 240 but I'm heavier." It feels heavier. I go, "If you can get me for 20, that's hard." So they either hip thrust me, or they do single-leg hip thrust, or they do the kneeling, or

some machine that doesn't put the stress in the exact-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... same place. Okay. And then you would say from a functional standpoint, you'll still hear people say, "You're lying down, it's not functional." Those people are dead wrong. I think hip thrust transfer better. If you just said compare it to squats, I think hip thrust transfer better to sprinting speed.

Dr. Bret Contreras

The research on horizontal plyo says they're better for agility, too, but I think squats would be better at agility. But I think they're better for rotational power, because when you rotate, you're more in full hip extension. So I think for rotational power, hip thrusts are gonna be better. And then they seem to tie for transfer to the deadlift, hip thrusts and squats. But I bet you squats build better deadlift strength off the floor, and hip thrusts probably build better lockout strength.

Dr. Andy Galpin

Makes sense.

Dr. Bret Contreras

But as far as just straight up, they transfer to the deadlift similarly. They lead to similar horizontal pressing strength, pushing against a wall as hard as you can, which is a very important-

Dr. Andy Galpin

Mm-hmm

Dr. Bret Contreras

... sports functional performance outcome. Hip thrusts seem to be better at isometric mid-thigh pull, due to joint angle specificity.

Dr. Andy Galpin

No doubt. Yep.

Dr. Bret Contreras

And for jumping, they're better for horizontal jumping.

Dr. Andy Galpin

Broad jumps, things like that.

Dr. Bret Contreras

Broad jumps. But then for vertical jumping, they probably tie. You'd think squats would be better, but in the literature, they probably either tie or maybe a slight edge for squats. But the bottom

line is you should be doing both. You should be doing both of them. Oh yeah, they neither transfer to lumbar extension strength. What else is there? They don't build lumbar extension specific strength in either one of them.

Dr. Andy Galpin

Bone mineral density? Any research on that?

Dr. Bret Contreras

None on bone mineral density, but where would you do it, in the lumbar spine?

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

Yeah. If that was the case, I would think squats would be better. But-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... anyway, I think what that shows is for sports performance, you need a variety of exercises that, multivectorial training. Force vector training. Do heavy, medium, and light stuff in your main directions. Yes, sagittal plane stuff is gonna be paramount in sports because-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... we stand on two feet, but don't be afraid to... But anyway, so the functional crowd, they're wrong. It's really hard for people to fathom that an exercise can transfer, like supine exercise can transfer to sprinting.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

But it does. Then the other arguments would be, I've heard it all, okay. It's really bad for your posture. It's gonna grow your waist.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

It's not gonna grow your waist. It doesn't activate the obliques much, or the rectus abdominis. It's

not gonna screw up your posture. It's not gonna break your back as long as you, well, not as long as. You just have to-

Dr. Andy Galpin

And you haven't actually seen hardly any back injuries-

Dr. Bret Contreras

No

Dr. Andy Galpin

... with heavy really.

Dr. Bret Contreras

There's not nearly as many back injuries. But I think the problem, I think why powerlifters don't like it is they see someone like me doing all this weight. So they're like, "If that guy can hip-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... thrust, then I can." And they load up too heavy. I started with 185 back in the day-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... and worked my way up gradually. You got to start light and get full hip extension and work your way up gradually and get that feeling of that full glute squeeze and the full hip extension, full hip hyperextension. And so they'll do it, and they're going so heavy they're only working the bottom ranges, and they don't feel it much. If they would've went lighter and went full... Say they went light, like 135 their very first time and did a pause at the top in full hip extension and did a set of 15 with a three-second pause at the top, their glutes would've been lit up-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... and they would be convinced that it works well. But instead-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... they load up 405, and they did 80% reps where they failed to get the 20% of full hip extension,

didn't lock it out, didn't pause at the top because they could never reach there in the first place, and had anterior pelvic tilt-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... and full spinal extension trying to mask, trying to pretend you're coming up higher.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

But the bar didn't rise any higher.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

They just altered their torso to make it look like they went higher. And-

Dr. Andy Galpin

And then their back hurts the next day.

Dr. Bret Contreras

Yeah. And then their back hurts. It doesn't feel right. They don't even feel their glutes. They're like-

Dr. Andy Galpin

Right

Dr. Bret Contreras

... "This is stupid. Why am I even doing this?"

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

That it's redundant. If a study on squats showed that it built the glutes the same, why do it?

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

But when would they use that argument for any other muscle group? If-

Dr. Andy Galpin

Well, it-

Dr. Bret Contreras

If lateral raises built-

Dr. Andy Galpin

No

Dr. Bret Contreras

... the side delts the same as military press, which guy would say don't do laterals then?

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

They'd say do them both.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

If leg curls and stiff leg deadlifts built one of the hamstrings the same, would they be okay with that? You'd probably, they'd-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... they do both, or they'd probably say, "I bet you they grow different part, like the proximal versus distal or different subdivisions. We didn't look at the whole level of muscle, the full length of muscle in the semitendinosus, semimembranosus, and then long head of the biceps femoris and short head." They would be skeptical, but they're quick to throw out glute isolation movements.

Dr. Andy Galpin

Yeah. Whenever I think about this topic, couple things jump to my mind. One of them is false dichotomy, and the other is mutually exclusive. So when we think about this, nowhere ever do I recall you saying things like, "You should only ever hip thrust," or that the hip thrust is ultimately always better, or like any of these things. So when I say false dichotomy, what I mean is you don't have to do a hip thrust or any glute exercise as your only option, and you're not saying it's the best option. It's just looking at research to say, "Is it actually working?" And when studies come out to suggest it works the same or better or less, it depends on the outcome goal. It

depends on what we're training for. And all we're looking, to put sort of words in your mouth, is what do we know about the quality for this outcome? And there's never a rationale to think it is only ever going to be, say, a hip thrust versus a squat, or a hip thrust versus an RDL, or hip thrust.

Dr. Andy Galpin

You can do both. There's no rule that says you have to choose squat or this one. And there's also no rule of you can't do both at different times. It's never ever going to be an answer of is this exercise better than that one. That's just not how this stuff works. It is simply what do we know that is positive? What do we know that has potentially limitations? How do I put my person in the best position to likely succeed as a starting place? Research, as you've outlined thus far, it only shows us what's most likely to work most people most of the time.

Dr. Bret Contreras

Yep.

Dr. Andy Galpin

It's just a starting place. From then, you have to coach.

Dr. Bret Contreras

It's so weird because you've been to my gym in San Diego.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

I have strong clients. They're impressive. I would say we're the strongest all-female, all-natural, all-female gym in the world.

Dr. Bret Contreras

I wish there was some gym in Brazil or Russia and we tested them.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

We tested them, and they said-

Dr. Andy Galpin

Drug tested them

Dr. Bret Contreras

... "Let's compete." Because I could tell my girls, "Oh, we got called out. We got to compete with them. It'd be fun." But would you do strong lifting? Which exercise would you do?

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

But yeah. In strong lifting, the big six, I'd love to take on other gyms in the world who think they're stronger than us. And these girls don't take stuff. They're, like I said, all natural, and we are so strong at chin-ups, bench press, military press, squats, deadlifts, and hip thrusts. Are we as strong as the best powerlifters? No, not at squats and deads, but I got girls squatting above 315. One of the girls in strong lift comp squatted 405. One deadlifted 425. 405, 385, three girls 385. So we're not some wimpy gym, but it's so weird that you'll see criticisms of me, and they're like, "He just gives us girls hip thrusts and bands."

Dr. Bret Contreras

And I've never given that because I don't know the answers, so it's always been-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... kind of that rule of thirds.

Dr. Bret Contreras

A third from vertical, a third from horizontal, a third from lateral rotary. But I do wonder, okay, if volume wasn't equated, what if you did just do hip thrusts and bands, and you contrasted that to their programs?

Dr. Andy Galpin

Mm-hmm.

Dr. Bret Contreras

I bet you you'd get the same glute growth without quad, hamstring, and adductor growth. And then you could say, "What's your goal? Do you want just glute growth, or do you want all of it?"

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And then if you want all of it, probably do the rule of thirds. If you want more quads, then focus more on quad-dominant movements. If you want more hams, focus more on hinges.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

But yeah. Do your squats in a quad, more upright.

Dr. Andy Galpin

Right.

Dr. Bret Contreras

Do a little more volume from the squat, lunge category. If you want more hamstrings, do more hinge-y stuff. But yeah. One thing I like about hip thrusts is everyone can do a hip thrust. People have bad anthropometries or poor anthropometries for squatting and deadlifting, but hip thrusts, it's a bridge.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

You just put the bar in the middle of wherever the middle of that bridge is in the hips, and you thrust. Anyway, what you said, though, you hit the nail on the head. They're all tools. And if you're starting out and you can only afford you could be 80% as good of a carpenter with these tools, but you want to be the best carpenter in the world, you want to be the best at your job, you better have a lot of different specialty tools.

Dr. Andy Galpin

Yep.

Dr. Bret Contreras

And that's what I like, having all the machines, all the exercises, all the exercise variations. I just told you how we can still do hip thrusts when their hips are hurting, when they're bruised up, or-

Dr. Andy Galpin

Yep

Dr. Bret Contreras

... I can tell you when someone's low back is hurting, here's what we do. When your knees are hurting, here's what you do. If your inner thighs are too sore, here's what you do. We just have protocols for everything. If this gives you pain, try this. If you're old and don't want this, then we're going to do this instead. You got to have a lot of tools.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And what if you're trying to grow your glutes without growing your legs? Then hip thrusts and

glute bridges become a lot more friendlier options.

Dr. Andy Galpin

So one more question I have for you. Why is it so hard to grow the glutes without targeting the legs?

Dr. Bret Contreras

Okay. Because you look at some of the most effective glute exercise are squats, lunges, deadlifts. They work a lot of muscle mass. So let's think about the glutes Ideally, the knee would stay bent. Why? Because that's going to take the hamstrings out of it largely. When the knees are bent, the hamstrings are slackened, the glutes are going to take up more of the brunt of hip extension. All right, but then when you sink really deep, how are you going to work the glutes without working the adductors when you're going super deep? You do deep squat. The deeper you go, the more adductors you bring into play. So, whenever you go really deep, you're going to work the adductors. If you're doing anything with knee extension, you're also working the quads. There's some evidence that when you carry out knee and hip extension at the same time, the glutes don't do as much. They don't activate as much, because you're coordinating two things, and you're not focusing on driving the hips forward maximally.

Dr. Bret Contreras

You're coordinating those two actions. And so it's like, all right, straight leg hip extension is great for glutes, but it also works a lot of hammies. Knee extension work is great for glutes, but it works a lot of quads and adductors, and you better do these in the most glute-dominant fashion to work a little more glutes, a little bit less quads, or whatever. So, just hip extension alone, what are the hip extensors? It's not just the glute max. It's the glute max, the adductors, and the hamstrings. So anytime you do hip extension, it's those three in combination. How do you hone in on the glutes? You could say, "Well, why even do hip extension at all? Do abduction." Does that maximize lower glute growth if you lean forward?

Dr. Andy Galpin

Right.

Dr. Bret Contreras

And if you start doing all your volume of leaning horizontal plane hip abduction, would you develop overuse injuries? Probably. So, you have to look at, all right, what about loaded posterior pelvic tilt? You just do a glute squeeze. That you feel mostly in the glutes, but that's such a short range of motion. Is that going to be effective at growing the glutes? We don't know. What about hip external rotation? That uses mostly glutes.

Dr. Andy Galpin

Mm.

Dr. Bret Contreras

Does it work the upper and lower gluteus maximus? Probably, but how do you create a program around that?

Dr. Andy Galpin

Tough, yeah.

Dr. Bret Contreras

So, in theory, you do more hip external rotation-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... more posterior pelvic tilt, more leaning forward abduction, abduction in the transverse plane. We have no evidence on these for growing the glutes. We have EMG evidence showing high EMG activation, but they don't always work you through a full stretch. They don't move you through as much excursion as hip extension exercises do. And so it's complicated. It's tough to just target glutes without working the other muscles in the quads, the adductors, the hammies. And so this is where glute bridges become very enticing-

Dr. Andy Galpin

Mm

Dr. Bret Contreras

... and hip thrusts, and then kickbacks. But even kickbacks, if you do kneeling kickbacks or kickbacks from a high pulley position, you're going to involve your quads. It becomes kind of like a step-up.

Dr. Andy Galpin

Mm.

Dr. Bret Contreras

If you straight leg kickbacks, it's more like a back extension. It's like a hinge, so you do them swoopy.

Dr. Andy Galpin

Mm-hmm.

Dr. Bret Contreras

So, there are ways to kind of make things more glute dominant. But you'd have to do more volume because you're not doing the biggest bang for your buck exercises. So, can you do more volume? It would be really fun to do a controlled experiment looking at the basics versus a very

grow your glutes without growing the legs dominant program. And look at, do you get the total glute growth doing a lot more volume for glutes because they're not as effective, but then you don't get the quad and adductor and hamstring growth. It's not easy to do. You're going to have a lot of bros telling you you're doing it wrong.

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

But it is complicated because the glutes are involved in the hip extension. Like I said, there are other hip extensors. Hip abduction, you got the glute medius, glute minimus, and TFL that do hip abduction as well. Hip external rotation, you got the hip deep six, hip external rotators.

Dr. Andy Galpin

Mm-hmm.

Dr. Bret Contreras

And so you kind of create a pro-- Even posterior pelvic tilt, the abs can do it.

Dr. Andy Galpin

Yeah. Sure.

Dr. Bret Contreras

So when you're doing a glute squeeze, you got to make sure it's not the abs, it's coming from the glutes. So, you're not going to be doing the most popular glute exercise, all the squats and lunges. You could throw those in and just do a couple sets and not do progressive overload, because you shouldn't fear getting gigantic quads-

Dr. Andy Galpin

Yeah

Dr. Bret Contreras

... from just doing the occasional squat or lunge. You just might not utilize progressive overload, and you got to do them in a glute-dominant fashion, leaning forward, sitting back. But it is hard. It's not easy to do, and it requires biomechanical thought and consideration, which I don't see from a lot of people. Another criticism of the hip thrust is just because it looks sexual in nature.

Dr. Andy Galpin

Oh, sure. Yeah.

Dr. Bret Contreras

So what I started doing-

Dr. Andy Galpin

Sure

Dr. Bret Contreras

... because I heard this on podcasts by a couple people. So what I start doing is saying, I start doing reaction posts to them, and I start saying, "Okay, so you're saying this looks gay to do, but what is a Romanian deadlift? You're doing loaded bending over. So you're saying you'd rather do loaded bending over as a man than loaded thrusting? Personally, I think loaded thrusting is the more manly thing to do, but you're saying..." So anyway, I put it back in their court and point that out. It's always a funny thing.

Dr. Andy Galpin

I got you. Yeah.

Dr. Bret Contreras

I'm fine doing loaded bending over. I'm fine doing loaded opening and closing of your legs with abduction and adduction, and I'm fine doing loaded thrusting. It just needs to become more common and more familiar. But yeah. What it looks like shouldn't dictate... But I get it. I do get it.

Dr. Andy Galpin

I hope we have a little more maturity with exercise selection than that. When you first got here today and we were talking, I said, "Hey, I don't want to spend that much time talking about the glutes."

Dr. Andy Galpin

And, well, we did the whole thing. But that's okay.

Dr. Andy Galpin

Your knowledge is vast in many other areas of strength training, and you and I love strength training. We could do this for a very long time, very often. But One way or the other, we tackled a lot of information. I'll reiterate something I said earlier. Although we did focus on the glutes a lot here, I really do hope people can pull the lessons out to other forms of training, other training goals. You laid a lot of critical information about basic things like paying attention to what the client actually wants. It sounds funny, but that's really what you said. You notice clearly your clients, who just happen to be mostly women, were really wanting a certain thing. Now, maybe other women want different things. It doesn't matter. The point from a coaching perspective was you really actually listened to what the client wanted. In this case, many of them wanted bigger glutes. Could be selection bias there.

Dr. Andy Galpin

It doesn't actually matter. It's specificity. It's getting better results because you're being more specific to the actual goals and listening to the client and not worrying about what you thought

was a better exercise because that exercise worked better for you or for other clients, or a study said that. It's paying attention. So that was one thing I learned about really thinking about the client goals. The other one was, again, the examples were glutes and hip thrusts, but it doesn't matter. It is making sure if you're not getting progress, that you are truly progressively overloading, that the effort is there, and that you're not distracting it with either other exercises or other forms of exercise or other life things, and making sure that there's enough stimulus in the way that you want to drive adaptation. And if you're not getting it there, then you need to think about other options.

Dr. Andy Galpin

More variety, more ranges of motion, less range of motion, figuring out what one thing at a time is you need to change until your goals actually start, or the thing you're trying to target starts making progress. And then you gave a ton of technical details. You covered a lot of biomechanics. You covered sagittal plane and frontal plane, and we covered a lot of anatomy. So hopefully, people that have not had the exercise science background that you and I have will have learned a ton of things, again, whether they're coaches or themselves, so they can follow along more with research to get better application for their own individual process. And then really at the end there, we finished off with talking about how do you understand when new research comes up, implementing, changing, and adapting so that you're staying true to your core, your beliefs aren't changing, your principles aren't changing, but you're focused on outcomes, not methods.

Dr. Andy Galpin

And methods come, methods go. What is the outcome you're really after? So, a lot of value, hopefully, in all those areas. There's probably other summary points that I could think of, but those things kept coming back to me. Things that people say, but you gave so many direct examples of that from the scientific literature, from physiology, from anatomy, to many years of experience that ultimately that's invaluable information. I know that you provide a ton of value on your social media. You do a ton on your YouTube page, and potentially, I don't know if I could spill the beans, but maybe more YouTube stuff is coming in the near future. I've actually been to your seminars before. I've seen you speak a bunch of different times. So you are not shy about giving out information. I'd love to know where people can learn more about you and all those things, but you have everything. You have training programs like Booty by Bret.

Dr. Andy Galpin

My wife does it. It's very affordable, reasonable, good program. So that all said, thank you for all that. As much as you are a business person and you've got money to make, you have given away so much stuff over the years at no or very reasonable price.

Dr. Andy Galpin

You've changed a lot of people's lives. Not only have you grown some butts, but you've really educated a lot of people. So thank you for all that. And thank you for my wife because she loves your program so much. That said, man, where can people pay attention to your stuff and learn it, and what is the best avenue?

Dr. Bret Contreras

Yeah, it's been Instagram for the last few years. That's my main focus. Like you said, I'm going to start focusing on YouTube more. And then something we should all be doing is getting emails, newsletter. We should be better at that because who knows? You can't predict these social media platforms.

Dr. Andy Galpin

Sure.

Dr. Bret Contreras

I don't send my newsletters out enough, but I never spam people. So, that you get at bretcontreras.com. But thank you for the kind words. Always happy to come back down the road and talk about other topics or updates if we have new science. Hoping to collaborate with you on some research down the road with your new facility. Seems amazing. And I've watched you rise up through your career. We've watched each other rise up.

Dr. Andy Galpin

Well, you were way ahead, man. You were so-

Dr. Bret Contreras

Yeah, but we met through Barbell Shrugged podcast and stuff, right?

Dr. Andy Galpin

Yeah.

Dr. Bret Contreras

And then seeing you become this rock star on Andrew Huberman's podcast and seeing you grow this new research position, this new professor position, there's no one who deserves it more because I like to think I'm in the same group. We don't just read the research. We work with actual clients, and it's different when you do that. You're looking at maximizing every athlete's performance on an individual level, and you can't just apply research to the masses. You have to do a lot of testing and figure out what's going to help them, what are their deficiencies, and what are the strategies that are going to help them improve the most. And I have so much respect for you as a practitioner, as a researcher, and as a fellow person in this industry who cares about steering us in the right direction. So thank you so much for having me on. It's an honor, and I feel very privileged to have scientific discussions with someone at your

level.

Dr. Bret Contreras

It's fun for me, so-

Dr. Andy Galpin

I had a blast, man

Dr. Bret Contreras

... I hope the people enjoy it, yeah.

Dr. Andy Galpin

Thank you so much for being here. Thank you for joining today's discussion with Dr. Bret Contreras. To learn more about Bret, follow along on his social media, see his products, courses, and other relevant items. Please check the show notes for direct links. Thank you for joining for today's episode. My goal, as always, is to share exciting scientific insights that help you perform at your best. If the show resonates with you and you want to help ensure this information remains free and accessible to anyone in the world, there are a few ways that you can support. First, you can subscribe to the show on YouTube, Spotify, and Apple. And on Apple and Spotify, you can leave us up to a five-star review. Subscribing and leaving a review really does help us a lot. Also, please check out our sponsors. The show would not exist without them and their exceptional products and services. Finally, you can share today's episode with a friend who you think would enjoy it.

Dr. Andy Galpin

If you have any content, questions, or suggestions, please put those in the comments section on YouTube. I really do try my best to read them all and to see what you have to say. I use my Instagram and X profiles also exclusively for scientific communication, so those are great places to follow along for more learning. My handle is @drandygalpin on both platforms. We also have an email newsletter that distills all of our episodes into the most actionable takeaways. We have newsletters on how to improve fitness and VO2 max, how to build muscle and strength, and much more. To subscribe to the newsletter, just go to performpodcast.com and click Newsletter. It's completely free, and we do not share your email with anybody. Thank you for listening, and never forget in the famous words of Bill Bowerman, "If you have a body, you are an athlete."