



Tim Ryan – How to Determine the Optimal Resistance Level

Lawrence: Lawrence Neal here. Welcome back to [High Intensity Business](#), the podcast where we discuss high intensity strength training and provide you with the tools, tactics, and strength training strategies to help you grow your strength training business.

This is episode 361. This is Part 5 of the High Intensity Training Fundamentals Series with [Tim Ryan](#). [Tim Ryan](#) is a Master Super Slow Instructor and owner of [Strong Life Personal Training](#) in Barrington, Illinois.

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Tim, welcome back to the podcast.

Tim: Thank you, Lawrence. Glad to be here.

Lawrence: Great to have you again. As always, I really appreciate you investing so much time with me on this podcast to complete this series. It's great to see that we are at Part 5 and still have so much to cover. I'm excited today to wrap up some of the stuff related to time under load and optimal window of time

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under load that we covered last time. But then also get into how to determine optimal weight load resistance for clients and for discrepancies and so on and so forth. Take it away. I'm happy to start wherever you want to carry on from.

Tim: Alright. Just to tie up a few loose ends from last and bring it together. And then we'll start to move on to other topics that are somewhat logically related to this. We spent a lot of time talking about time under load last time, not only defining the terms, but defining the optimal window for time under load. We talked about this need to stay within the anaerobic energy systems so that we're progressively recruiting through those muscle fibers, fatiguing them, bringing them ultimately to the point of momentary failure within that anaerobic window. I outlined that on the low end maybe 45 seconds of load time and on the high end maybe having this all wrapped up by about 90 seconds load time. And not getting into this really excessive time under load beyond that.

When we were moving forward into nailing down with the weight load that we are using that corresponds with that and even the amount of repetitions that may be performed within that window. This is where it starts to get more to the practical aspects. On the obvious level, this time under load, if we know that we want to achieve momentary muscular failure within 45-90 seconds, then we have to train with a weight load that's going to bring that about. There is some art to this or there are things to be aware of that

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influenced this. You can certainly through trial and error find a weight that somebody can lift for at least 45 seconds and can lift for more than 90 seconds and they reach failure by that point. I think sometimes, based on a subject's skill level, based on a subject's motivation, and tolerance for some of the discomforts related to exercise and so forth. That oftentimes you make it somebody appears to achieve failure within that window but then again they are not really at failure from a physiological standpoint. Some of this pertains to their willingness to push and really legitimately achieve failure and not just mentally give up or psychologically, mentally reach a point where they are just not going to push anymore.

A lot of times people can on the surface appear to be at failure but they are really not. I just experienced this yesterday. I was working with an individual who is actually a trainer, a high intensity trainer, at another facility that I'm assisting and consulting with. I took one of their trainers through a workout. I knew from past experience doing a little bit of work with this trainer that he really is not somebody that works very hard. I don't really think that he is that into the training despite the fact he is an instructor and a trainer. He doesn't seem to be that into it. At any rate, I took him through a workout and he performed very slow smooth repetitions. He maintains his form well. He behaves in that regard that if you are just observing him he is very slow, controlled, and smooth. He sits still. He doesn't squirm around. He doesn't resort to bad techniques or things like that. But at the same time, there is almost no apparent effort coming from this person at all. He is just going

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along and then all of a sudden the repetition just stops and he can't move anymore. He is not showing any signs of exertion. He is not breathing heavily. He is really not showing any signs of effort that he is giving his maximal ability there. He reaches a point where he just stops. Despite all types of encouragement and so forth the weight stops moving. He doesn't go anywhere and he'll just make a comment like, "Ah, that's all I got." But he'll get off the exercise then and just no signs that he exerted.

What I started doing with him is when he reached that point, and a couple of them, I gave him a little assisted rep to try to maybe get through the sticking point and see if he could continue on. I'd give him that assisted rep and then ask him to do a very slow and controlled downward negative stroke, and then try to encourage him to attempt another repetition. A couple of times what happened, in fact, he was moving so slow that by the time he was at his perceived failure point I'd give him that assisted rep. He'd come down really slow and I'd say, "Okay, next time as you come down to the bottom here and you make your turnaround, I want you to just give me all out every bit of effort you have. Forget about trying to move slow at this point. Just push as hard as you can and lift that weight. I don't care if you go faster." He'd come down and all of a sudden he would just zip the weight and would go right up. I'd say, "Try it again." And zip, it would go right up. He would do 3 or more reps and you're thinking, "Okay, I thought his guy was at failure and now all of a sudden he just did 3 reps." I wouldn't say he jerked it up but maybe he lifted the weight in a couple of seconds. This was after being at

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failure, after me giving him an assisted rep, him doing a very slow negative. Suddenly he has all this gas left.

This I think harkens back to what I said in one of the earlier sessions where with a lot of people this focus on moving ultra, ultra slow turns them passive. They are being so gentle and they are pushing with such mild effort in their attempt to just simply move slow that they are not really exerting at a high level. They are not generating a lot of deep muscle contraction or muscle tension and force is not being produced. It seems all the focus is just behaving perfectly but internally they don't really have that intensity, that high level of effort and so forth. As I discussed, once those shackles are released and you say, "Okay, stop trying to go so slow and just push hard." Suddenly, he's got all this gas left in the tank and he puts more effort. Now all of a sudden because he is not trying to move so slow he is able to engage at a higher level and push at a higher level. He's got enough muscle force left in him that he can easily perform that.

Long story short, I think what happens with a lot of this is that an initiated instructor into this concept would observe this person and think, "Well, he reached failure. He couldn't do any more repetitions. He reached failure and it was in the time under load window that we're looking for. Okay, that's the right weight load." Obviously it wasn't the right weight load because even after he was at so-called failure, all of a sudden he had several more repetitions in him and he didn't even really truly reach failure.

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When we were trying to determine this time under load, you've got to work this other issues out first and make sure that a person is really truly working at a high intensity and truly engaging their maximal ability of those muscles to put out that effort, and that you're getting a legitimate failure in the first place.

Lawrence: Did you jacked the weight up for that subject? Or would he then just quit sooner?

Tim: Well, I think from experience what would happen... In fact, this did happen on some of the exercises because I have worked with him a little bit before and I knew he was like this. I try to give him a heavier weight load right from the start and he would just act like he couldn't lift it. And then I have to strip the weight and get to a level that he would lift it. This is the same symptom there. The reason he couldn't lift it is because he wasn't really trying. He is so focused on being gentle, slow, and this passive effort that he wasn't really digging in and engaging and trying to lift the weight.

This actually brings up a good point: when you are truly lifting the proper weight load, number one, from the very first rep it's going to be hard to move. If you are trying with a weight load that you are capable of just from the first rep zipping it out without much effort, you are not going to reach failure within the proper time load or the time under load. You have to, number one, be willing to engage at a higher level right from the start, which it's going to

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take some effort, it's going to be difficult to move right from the start. We talked about this earlier where sometimes on those big heavy exercises like leg press you need to give that assisted rep just to get the weight moving at first.

Lawrence: What other exercises might you give that assisted rep to start? Leg press is one we do. I'm curious if there are other ones as well? Like maybe chest press or other ones you might do that for.

Tim: I would say probably number one the leg press for sure, chest press, maybe a pull down. Sometimes a row like a compound row. Those types of bigger, heavier compound movements seem to be the ones that you have to help get that subject engaged a little and get things moving. I'm looking at things where the loads are heavier. Those bigger muscle groups kind of thing. Not that I wouldn't ever do it on any of the other exercises. It depends on the person. But I think those are the big ones that you tend to give that light assist just to set things into motion and get somebody engaged.

Lawrence: Probably the more uncomfortable exercises. Those big multi-joints and they are also utilizing a lot of musculature so it requires a lot more effort. That's probably why, right?

Tim: Yeah. And another thing, if I'm doing a neck exercise, what I tend to do with the neck exercise, so let's say neck extension, extending back, I will position

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the person. Get them into the neutral position so their head is neutral. Head and neck are neutral. They are looking straight ahead. The movement arm is typically about in a halfway position. It will perform a transfer in that position where I'll gradually hand off that load to them while they are gradually engaging, building tension in their neck. We make that transition where that load is transferred to them in the neutral position. And then, I asked them from that position to start extending back. They will do the full extension and then they will do that negative where they are coming down and coming into the bottom position to make that first turn around. Essentially, they've had a rep and a half before they get to that lower turn around. By that point, they are fully engaged. They are in control of the load. Their muscles are registered. All of that. And there is a little bit of that built in warm up by the time they get to that first lower turn around.

I think that's important because, number one, to get positioned in that exercise and to have their hip in the right position, engaged with the pad. You don't want to start in a fully flexed position at that point and try to get out of that. I think it's safer to begin in that mid-range position. There will be some things that will do that. On the leg press you are obviously not going to do that. Because as a trainer you are not going to lift the load up and hand them that heavy load of the leg press in the mid-way position. They are starting at the bottom on the leg press but then we are doing that first rep kind of engaging it together to some degree to get things set into motion.

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Back to this proper weight load is that in most cases you're going to be lifting a load that is difficult right out of the gate. That it's hard to set into motion and get going. In other words, you are going to have to pretty well engage at a high level from those reps. Obviously, it is still sub maximal to some degree because you are going to be able to do several repetitions with that and continue on for a minute or more. What I find is that if people are training with a weight load that seems easy to them at first they are not really going to reach failure in the proper time under load. They are going to go too long. This becomes an issue with people that they want to feel like it's easy for the first few repetitions and gradually gets harder. Particularly with the slow movement speeds and so forth, it's going to be hard at the start.

I think what happens with a lot of people where it fools you into thinking that they are training with the right load is that, one, people achieve this false failure like I've been describing. Two, they are not really engaging with the heavy enough weight load at the start because they are tending to be passive. They are tending to just put forth a mild effort at the start. They never really even engage that weight load at high enough weight load from the get go. This becomes again a lot of work to get somebody to comply and do that stuff. I think we already discussed the point that this assist at the start to get things set into motion is a way of tricking them to train with a heavier load. Because once they get this load set into motion, once their muscles and the nervous system register the load and they see that they can

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handle it in their body, it sort of activates the muscles at a higher level, they can then keep things going from there.

You really need to get the person to get a true failure to know whether they are at the right weight load. If a person reaches failure but they are passive, they are not breathing heavy, they are not showing any real signs of exertion or effort, there doesn't appear to be a lot of engagement on their part but they are pretending they are at failure, you don't really have the right weight load.

As the subject I just explained, when I took the shackles off and I said, "Okay, let's just focus. Push harder. Really engaged at a higher level. Stop trying to move so slow, Just push hard." And then suddenly he was able to keep going and do it. That was a clear sign that he wasn't really truly at failure. A person like this is going to take a lot of effort to work with in order to teach them to engage at a higher level and create more muscle tension and start to train at a higher level. I know through experience that for a lot of people this is a hindering factor. This is a limiting factor that they are going to limit their own results because they are not willing to work hard and they are not willing to really engage the muscles at a higher level and train to a true state of failure and get to that deeper level of fatigue.

We want to make sure that what we are doing is as close as possible to a true failure and getting that failure to occur within that time window of 45-

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90 seconds ideally. Once, we have established that, if you want to pay attention to how many repetitions somebody performs then you are going to correlate that based on what is the speed of the repetitions. If you are somebody that's doing more of the standard [Nautilus](#) protocol of 2 seconds up and 4 seconds down, roughly 6 seconds per rep, that falls back into like [Nautilus](#) used to recommend, maybe at 8-12 repetitions for your set. Because that's going to put you maybe 48-72 seconds, a minute and 12 there, so that's going to be within your window. If you are training a 5-second positive and a 5-second negative type of cadence, so 10 seconds per rep, you may be doing somewhere between 4-8 reps within that time under load window. If you are doing more of a traditional [Super Slow](#), 10 seconds up, 10 seconds down, you may be training on the low end with 2-3 reps to a high of maybe 5 or 6 reps at the very most.

Those repetition correlations are going to be based on what speed your repetitions are being performed at. But ultimately, you still need to pay attention to that time under load window because you don't want these sets going on over 2 minutes, 2.5 minutes, 3 minutes, 3.5 minutes which is what I have seen with a lot of people particularly with [Super Slow](#). They are just on the machine for 3+ minutes or more. Quite frankly, if you are training with a load that allows you to train that long, you are not really training with a heavy enough weight load. You need to get those loads heavier and achieve failure sooner.

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Of course, this brings us to the next situation: with a lot of subjects when you get the proper weight load on, they start behaving badly. They start to develop a lot of form discrepancies.

Lawrence: Sorry to interrupt you, Tim. Before we get there though... I don't know if you were now going into form discrepancies. How do we actually determine the optimal weight for someone? The optimal resistance. I don't know whether you are coming back to that but I feel like we might skip over it.

Tim: Right. I think maybe one last thing I could tie in with that is that... Obviously, we are trying to ascertain whether we are getting a true effort out of a person. They are really training to failure. Once they achieve that failure, you are satisfied that you got a pretty solid effort and they couldn't do any more than that. Now, registering what was the time under load that they reached failure to. Or this idea of time to concentric failure. What time period do they reach failure in? Is that within the 45 to 90-second window? If it is, then you've got the proper weight load. If they are going on beyond the time under load window and you are seeing that they are over a minute and a half, maybe 2 minutes, and they haven't reached failure yet or maybe they are reaching failure at an excessive time period then you are going to raise that weight load and try to bring them down into that range where they are supposed to be. Of course on the low end, if somebody reaches failure too soon then you've got to back some weight off and allow them to go a little bit longer. You are just going through trial and error training them to the point

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of failure seeing where that point of failure occurs in the time scale. If they are within the window, then good. If they are outside of the window make the adjustments up and down.

One thing I probably should add to this. One way of understanding whether they are truly training with the right weight load... Let's say they achieved failure and you think they are within the range. A lot of times what people do then is the trainers will start to micro-load where they put just a couple of pounds more. With the [MedX](#), you can raise 2lbs increments. Even with Nautilus if you get this little add on weights and things like that, you can make small increments. Some trainers, they will add 2lbs or they will add a pound. Some people get into this idea of adding a half a pound and just micro-loading. That stuff is certainly appropriate with a really advanced subject that you are certain is really training hard and giving you their all, and things like that.

One thing that you can test for a subject that is not at that ultra, ultra advanced level, but somebody trains to failure within a certain range, try to experiment with adding a little weight more aggressively and see what happens to their time under load. Let's just theoretically say somebody fails at 90 seconds. And in the next workout they come in and try to raise it at 10lbs and see what happens to their time under load. A lot of times you'll find that you raised it 10lbs and the person again achieves 90 seconds.

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Lawrence: You got to be indicative of them not being really pushing to failure.

Tim: Yeah. It would be indicative of somebody that was not really ultimately engaged at that level. Because somebody that really is truly engaged at that high level and achieves a legitimate failure and they are at the right truly correct weight load, you are going to see that if you try to add 10lbs that time under load is going to drop significantly. It may drop 30 seconds, or 20 seconds, or something like that. But if you add 10lbs or something to it and the time under load doesn't drop, and maybe the time under load increases. We understand obviously that somebody is going to get stronger and they are going to be able to train progressively heavier weight loads. But that big of a jump from one workout to the next, if they don't significantly drop in time under load, it's probably an indication that they weren't training with a heavy enough weight load in the first place.

I've talked to trainers where sometimes, as an experiment, they will sneak 20lbs more on the subject and just see what happens.

Lawrence: I love this idea. Can I just make one comment quickly?

Tim: Sure.

Lawrence: Just to add color to what you are saying, like, more narrative. Our policy is to add 2lbs depending on where they are in the ideal rep range for their

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particular protocol. But you are absolutely right. Some people are sandbagging and some people will... There is an opportunity there to maybe one workout increase the weight quite significantly as you're saying to really see if they are using a maximum effort and to figure out if we got the weight right at the start. I love this as a way of breaking away from the normal process to just make sure that you are actually giving this client the ideal weight and giving them an effective workout experience.

Tim: Yeah, exactly. Sometimes what will happen is you'll add 10lbs or something and the person doesn't even notice it. They don't even make a remark that it's heavier.

Lawrence: Yeah, case on point.

Tim: They just proceed and they do the same time under load as the previous workout or maybe longer. They don't even recognize that the weight was 10lbs heavier. If you are getting something like that, you clearly weren't heavy enough in the first place. But think about this, like you just said, if you are only trying to add 2lbs, 2lbs, 2lbs, what you might not realize is it may take you 5 workouts to ultimately add 10lbs. You may perceive that they have improved every workout and they got stronger and stronger and stronger. And every time they come in I can add a couple of pounds and they keep getting stronger. But what you don't realize is that they could have handled 10lbs heavier way back when. And you took five sessions to

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gradually get them 10lbs heavier when in reality they could have handled the 10lbs five workouts ago. You think they made progress when in reality you just took five sessions to get them up to what they could have done in the first place.

Lawrence: One counter to this is we use a lot of advanced techniques. Obviously, we are always trying to get someone to muscle failure in the first set. Just to make that absolutely clear. But we are using slow negatives, assisted repetitions, rest-pauses, drop sets, etc., to help someone reach a higher level of intensity if they shrug off a failure on the first set or if they just really want that additional intensity. That's our own method.

Now, one thing we haven't really touched on though is I hear what you are saying about, yes, maybe the person is cheating themselves a little bit or maybe we are cheating the person. But there is a psychological adherence factor here when people see that weight going up incrementally even if it's not necessarily a true reflection of improvement. They are more likely to stick at it. That's then going to make them more likely to get better results over the long term. I think that would be one way of looking at this. Would you make that?

Tim: I think that's a legitimate point. It's certainly psychologically or emotionally satisfying to the person if you say, "Jeez, for the last 20 workouts, every time you've been here I've added 2lbs, I've added 2lbs and you've been

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incrementally going up, up, up. You are making progress every single workout.” From that standpoint based on their workout performance and based on their chart numbers they are obviously making progress with each session. Don’t get me wrong. I’m not saying don’t do that. Particularly, when you are starting a person from scratch and you are teaching them, and you are building them up, and they are getting acclimated to the program, they are progressing along and all that, that’s a legitimate tactic to follow.

What I am describing though is after somebody has been here for a while and once they are more acclimated to the training, and maybe they’ve been at this a few months and generally they are behaving, they have developed some good workout skills and things like that, then experiment with getting a little more aggressive with the weight loads just to see what happens to their time under load.

Anyway, certainly what you are describing is emotionally satisfying. But at the same time, you want to counter balance that with the fact that ultimately you want them to experience true physical change. You want them not just to be improving on their chart and on their numbers and everything but they should be experiencing a physical change. That they are noticing a feeling of increased strength and increased endurance and energy in their daily life. They are noticing changes in their muscles and getting more firm and muscle tone and so forth. Maybe starting to build, improve the shape and appearance of their muscles. All of these things that they experience. That’s

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ultimately what we want to achieve in people. We don't want it to just be merely chart performance or science something.

Lawrence: Yeah, absolutely.

Tim: You do have to counter balance it. This is where some of the art of being an exercise instructor is knowing your subject, manipulating these variables, and knowing when you can be a little more aggressive with somebody, and when you should just hold it back and keep refining their form, effort, and their techniques, and all of this sort of stuff.

Lawrence: Let me ask you one more question on this. I think for us. It's like we get around arbitrary recording which might sometimes happen through advanced techniques. We know for advanced techniques we are going to get them pretty smoked or at least as intense a workout as they can manage. What do you make of that? Do you think that's cheating from an instructor perspective? Do you think we should be more focused on being smarter about that single set and increasing the weight with the timeframe you suggested? What do you think of that as a way of approaching this?

Tim: You are referring to is it legitimate to use all those advanced techniques?

Lawrence: I'm thinking the best of both worlds I guess. I'm thinking can we micro-load this client to show them progress in a nice rapport which is going to help

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them adhere. And then make sure they actually do get the meaningful stimulus through advanced techniques. That's what I'm saying.

Tim: My general position on those advanced techniques is that they can be legitimate and very helpful. I certainly used them with certain people. Because as you pointed out, ultimately, we do have to get them to the point where the intensity is there, the effort is there, the muscle fatigue, all of that is achieved in a workout. Sometimes you need to employ these techniques in order to get that person to that level and bring them to an adequate level of stimulation to do what we are after.

On the flip side, my position would be if you are dealing with a subject that is really truly giving you their all and when they are getting to failure they are truly at muscle failure, they have completely exhausted their muscles to the point that there is nothing more that they can do, I think applying a lot of post failure techniques whether they would be assisted reps to force them to keep going, or breakdowns, slow negatives, and all this kind of stuff, if that is what you are doing with one of those more advanced legitimate effort subjects, I think you can really overdo it.

Lawrence: Yeah. That's a really good point.

Tim: Not only can you really overdo it but I don't think at some point with really advanced subjects that's giving you their all, I think a lot of that stuff can be

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counterproductive to the point where I don't think it's going to achieve anything more than true training to failure. Those are set extenders and certainly you can cause just a lot of torture to the person. But I don't know that there is going to be any achievement of extra results beyond what that person already gave you on their own.

Even looking at some of the studies. I know there have been some studies that show that some of these techniques do enhance results. I think probably what's going on there is that they are enhancing results with people that weren't really giving...

Lawrence: Yeah, I was going to say, are there? Because I'm thinking, I know [Discover Strength](#) did a study awhile back with advanced techniques and they saw... I might be getting this right but you can correct or someone can correct me if I get this wrong. But they saw no... I can't remember what they were measuring, strength or, probably strength. Maybe hypertrophy as well. But they saw no improvement with the advanced technique. But it doesn't mean that they wouldn't then use it for other purposes like variety, novelty, and helping the client adhere, and helping make the workout exciting for them over the longer term which I believe that's the great reason they are using them. It's one of the reasons why we use them. I'm under no illusion that. I don't know... Maybe you can correct me, Tim. But I don't think that, like you said, if you are someone who can train to a higher level of intensity to true

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muscular failure in a single set that they are going to provide much more in the way of results.

Tim: Yeah, right.

Lawrence: That's my take.

Tim: Well, as far as that, maybe [Discover Strength](#) study. I'm not sure I'm familiar with that one specifically. But I know a number of years ago [Wayne Westcott](#), who is an exercise physiologist from Boston, Massachusetts. He has done a lot of research and studies on various topics. I believe he at one point did a study with advanced techniques and I found out that did seem to enhance results.

My position would be that they are certainly helpful in certain circumstances, certainly helpful with those people that maybe are not getting to a true state of failure on their own and you are trying to induce more fatigue. Even from a standpoint of getting a person to tolerate the higher intensities, I think some of these techniques can be helpful. Because putting a person through that and getting them accustomed to that intensity and that deeper level of fatigue may translate into them being able to then train harder on their own. I'm not saying don't use them. But I think they have to be used smartly and in the right circumstances and with the right person and they can probably be helpful. But with a person that's really giving you all they got in the first

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place, I don't think they are going to add anything to it. It's just going to be more extending and it's just going to be a lot of nervous system fatigue where you just keep firing, firing, and firing those nerve impulses. But there is nothing left and you just sort of depleting the neurotransmitters and things like that.

Lawrence: One comment on that. Yeah, you make a really good point. You've got to look at the training record and the individual really closely to work out if it is sensible. Because the risk of overtraining is quite high if you start hammering them with those advanced techniques. I'm just curious how you might reconcile that with someone who really wants that? Have you ever worked with someone who is just an absolute beast? Can train to a single set to failure with perfect form and then wants to be hammered by advanced techniques and wants to train twice a week.

Tim: Just a glutton for punishment.

Lawrence: Yeah. And you are thinking is this individual genetically set up where they can still recover and improve that ridiculous amount of stimulus. Or is this person just [unclear] who is actually going to really start to feel crap in between their workouts and not recover and not get results. I'm just curious if you have ever worked with someone like that and how you managed that?

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Tim: Number one, I would say that type of person is rare. Normally you are not going to see that in the typical client that comes through your door. Or the years I've had people where maybe they are just somebody that has really been into this type of training, have followed it over the years, maybe they have read [Arthur Jones](#) works. They just have a personal interest or they have read [Arthur Jones](#). They have read [Ellington Darden](#)'s books. They have followed the high intensity training. Maybe they used to do the [Nautilus](#) training back in the day and all this kind of stuff. And they've just stayed abreast of it and they just have a really personal interest in the training and so forth, and they have done it for years. They may come in with that kind of attitude that they just want to be crushed. The more the better kind of a thing. I would say other than that most people are not going to be in that category.

The way our conversations go here they often stimulate other thoughts here. One of the things that I've certainly seen where with this intensity, with these advanced techniques, you can push a person to such a deep state of fatigue and just crush them so badly that that's going to take a very long time to recover from. I think we've seen this with some of the concepts that have been introduced into the high intensity field where training with more and more extended times, recovery times between workouts, and training with fewer, fewer exercises in a workout. I'm thinking about [Doug McGuff](#)'s books and things where you do the [Big 5](#) and train once a week. And then when you stop improving on that, then extend it out to 10 days in between workouts.

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And when you stop improving on that, extend it out to 14 days. When you stop improving on that, cut it back from 5 exercises to 3 and all of this kind of stuff.

I think some of that concept with this really extreme recovery period and very brief workouts with fewer and fewer exercises, I think some of this stems from we're causing the problem in the first place. It's like if you are just training beyond failure and you are applying a lot of these advanced techniques and you're doing... With the [Super Slow](#) protocol, there was a technique called 'thorough inroad technique' where you would train to failure and wherever you hit failure you push and push and push for maybe 10 or 15 seconds against the immovable wall. And just continue to push and push in maximal effort. Then you would come down, do slow negative, turn around and attempt another rep. And then wherever that next rep fails again, you push and push and push for 10 or 15 seconds. And you keep exerting and exerting until which point you cannot even budge the weight from the bottom. You've done these partial reps and you've done all of this 'inroading' after the point of failure to the point you've got nothing left. People used to brag about if you are doing arm curls or something, you would train to such a deep level of fatigue that even once the exercise was over you couldn't lift your limb. So that kind of thing.

With this idea that is just utterly training and draining every last drop of everything out of that muscle and then simply resting as long as it takes to

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recover from that. I think if you are doing that kind of stuff, number one, I don't think it adds any value. Once you have achieved failure, like I just mentioned earlier, once you've got a subject that truly trains to failure and gives you all they have, once you've done that, I think you have stimulated everything you can from that workout or at least that muscle group.

To do all of this stuff post-failure just needlessly drains your system and exhausts your nervous system. It just drains you down to the point of nothing which then requires so much recovery time that you're going beyond what is necessary to stimulate results and you are adding insult to injury and requiring such a lengthy recovery time. Or having to do a workout that has so few exercises in it that now you are not training enough – either with enough frequency or with enough different exercises to adequately cover the full body. You're forced to train in such a way that in order to survive that type of training you have to train so briefly with so few exercises so that you can recover from it. But then again, you are not training enough with enough exercises and with enough frequency that you are really going to get optimal results.

With all of this stuff, I think it needs to be used sparingly and only used with people as a way of getting less compliant subjects to train harder or to get to the proper level of fatigue. But you got to temper that with the subject you are dealing with. If you are getting a good solid effort and a true state of

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muscle failure, don't do too much of that. Maybe just occasionally do it as a hyper stimulation from time to time.

Lawrence: Thank you for that. Just one thing I wanted to mention, you mentioned [Body by Science](#). I remember it being said in that book. Not that you were calling out [Doug](#). I know you weren't doing that. You were just using it as a reference because it's that message which is being propagated out there in terms of this continuous reduction of volume and frequency. What he does say in [Body by Science](#) about advanced techniques is, I could be butchering this a little bit, but he says use them sparingly because of the reasons we've already discussed in terms of overtraining.

As you were saying regarding breaking the workout down over time to like a 2 or 3-way split and then increasing the recovery time. The way he does it and the way I believe it is stated in [Body by Science](#) is how that waxes and wanes throughout the year. It is like you might have a maximal recovery period of 11-14 days with a very consolidated program. But in the next month you go back to a [Big 5](#) or more exercises once a week. I like that approach where maybe there is value in oscillating up and down in that sense. Again, I could be getting this a little bit wrong so [James](#) you can correct me. [Dr. James Fisher](#) did a presentation at [REC](#) a couple of years ago where he basically looked at two groups who were training different frequencies over a long period of time. The cool thing is they both ended up at the same place. It kind of gives us license to experiment with these

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differing volumes and frequencies over time because maybe we all just end up at the same place anyway.

Tim: I do want to make the point that when I brought that up I certainly wasn't criticizing [Doug](#) at all or anything like that. I do think for a while it seems to have come down a little bit. But I do think for a while this high intensity field had sort of gone to the point where it was almost bragging rights to talk about how infrequently you train and how few exercises you do and workout. With the corresponding concept being that you are so advanced and you are training so intensely that you can only tolerate two exercises once every 14 days or something.

Lawrence: Do you remember the [Greg Anderson](#) interview with [Dave Durell](#) where he was saying that there would be trainees in his waiting room boasting about how infrequently they work out or they use the leg press. One of them was like, "I have to use the leg press only once a month because I'm using such a heavy weight or working so intensely." Greg made a joke where he said something like he interrupted their conversation. I think this genuinely happened if I remember from the conversation where he just said to both of them, "You know what, I can only look at the leg press. I can't even use it because I'm so advanced." Something to that effect which I thought was so funny. Very funny guy.

Tim: That sounds like something Greg would say.

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Lawrence: Were you quite familiar with Greg?

Tim: Yeah, definitely, back in the day during the [Super Slow Exercise Guild](#). He was a fellow Master Instructor. He really had a sense of humor and was a funny guy, very successful trainer and business owner. For people that don't know, Greg passed away a number of years ago. He is no longer with us. But he was a great guy. I knew him well.

I mean, that really illustrates the concept. I think this whole thing is what we would refer to. I don't know if you are familiar with this concept. But in the United States where we would say it sort of 'jump the shark'. It is a phrase that describes that you really took it too far and got too crazy with it and now it's to the point of ridiculousness.

Lawrence: What's the phrase again?

Tim: Jump the shark.

Lawrence: I never heard that. No.

Tim: Where this concept comes from is... I don't know if you have ever seen the TV show [Happy Days](#). It was in the 1970s and there was [Fonzie](#). Have you ever seen that show?

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Lawrence: Yeah. It was a little bit before my time maybe. But I still watched some of them.

Tim: It's an old comedy sitcom. It was a very popular show in the United States. In one of the later seasons, what happened is there was a show where [Fonzie](#) was going to jump his motorcycle over a shark tank. The episode was so outrageous and it got so crazy that now this [Fonzie](#) guy was going to be doing this feat of trying to jump this motorcycle over the shark tank. It was marked as a point where the show just got too naughty and took it too far and that kind of stuff. It kind of started this phrase that whenever something gets too far out of control and just to the point of ridiculousness we refer to it saying, "Boy, that's really jumping the shark." Or something like that.

Lawrence: Makes sense. I love it.

Tim: With that in mind, I think high intensity training sort of jumps the shark with this idea that we can only tolerate a couple of exercises once every 14 days. If we do anything more than that, we are over trained. I think it just got crazy with that or did at one point. I think if we come back to the point, maybe a lot of these crazy advanced techniques, or the thorough inroad technique, or all of these things that we try to do to just annihilate somebody.

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I think, number one, it is unnecessary and doesn't add any extra value. But it does cause an insult to our system whether the muscles themselves, or the nervous system, or just systemic fatigue that gets to the point that if it's taking you that long to recover there is a problem. We need to balance it with doing enough exercise. Number one, enough different exercises in a workout that you are covering all the bases and doing all the major muscle groups and so forth. That you are also able to recover within a reasonable amount of time and not have to have such an extended recovery period. A lot of this stuff. I mean, we pushed the envelope and we tried to follow this out to the point where let's try to create as much stimulation as we possibly can. I do think that there is a point that you've done all you can and you've achieved optimal stimulation and doing anything and above beyond that is just not adding any extra value.

Lawrence: It makes me think of what [Doug](#) has been saying for a while and reiterated it on the my last podcast with him which was that he saw a lot of people who are really obsessed with the stimulus side of equation really struggled to get results for many years which are just overweight or just not able to continue to make gains. I know many of those people really addressed the recovery side – sleep, nutrition, stress management, etc. They then just started to really get results, get much better body composition, get better results from their workout. But there was less emphasis on the stimulus side of things. It is connected to what you were saying there about this obsession with the stimulus might be a bit misplaced.

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Tim: Yeah. I think what we have here is that nobody truly knows exactly what the perfect level of stimulation is. There is no way to really measure when we've truly achieved that. The concept was always then is create as much stimulation as possible, create as much inroad, as much fatigue, etc. as possible, and then you can be reasonably assured that you stimulated enough. I think part of it might be that the level of stimulation required to promote changes and results and so forth is at a level that can be achieved just by simply training to failure and not applying all these extra techniques. Getting too over the top with all of these advanced techniques or thorough inroad program, you are just going too far and you are creating a situation where you can't train with enough volume or enough frequency to optimize results and things like that.

I do think we just need to balance all this and know who you are dealing with. And realize that if you've got a good compliant subject that's giving you their all, and doing the right things, and achieving true failure then you are just very brief and infrequent with these techniques. But somebody that is sandbagging and not giving you their all and not really getting truly adequately stimulated, then pulling out your bag of tricks so to speak and then start to give you the ability to get them to work harder and force them to a little bit deeper of fatigue. Again, some of the stuff is just the art of being an instructor and knowing when you need to do these things, when you don't, or being able to recognize signs with your subjects and what it takes. That

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sort of thing. There is a lot that goes into that and being able to recognize things.

Obviously, for the most part, one of the problems is people do not train hard enough. The average person that walks through our doors as a client, I would say the biggest hindering factor is the fact that those people are not willing to work hard enough. Or they don't have the corresponding workout skills to perform the exercises at a high level and to really get to a true state of momentary muscle failure and push themselves to that effort and do all the things that we'd like to see. A lot of times we have to spend all this effort trying to get them to work harder and to overcome some of these obstacles so that they will work at a higher level. I pretty much think probably the single greatest limiting factor from the average person is the fact that they are not willing to put up with the intensity, and the hard effort that is required, and the physical discomfort that comes along with that. And they sort of self-limit themselves by hindering their results with that type of thing. Anything that we can do to get them to work a little bit harder, to tolerate that, and to get to a deep level of fatigue then certainly those advanced techniques are going to be legitimate and a tool that we can use to do that.

This gets into areas too where you've got to recognize again who you are dealing with and what they will tolerate because you also run the risk of scaring people off if you do too much of this stuff and work them too hard to the point that they will just dread it so much that they will just quit.

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Lawrence: One of my clients didn't want to work with me as a trainer because she said I'm like a Nazi.

Tim: Oh jeez! I've heard those kinds.

Lawrence: I'm working on it.

Tim: I've heard those kinds of concepts. A lot of times I look for signs either the way somebody is behaving, the way they are reacting to some of the stuff, and maybe some of the comments that they make. I'll get clients out of somebody where... Again, this is coming from a person that's maybe not truly at failure and is working relatively hard and getting to some of those uncomfortable stages of the exercise. I'm not implying that they are not really working fairly hard. But even coming from people that don't really truly reach a legitimate failure they will start making comments. Once the exercise is complete they will sit there and shake their head and they'll go, "Oh my gosh! This is so hard. Gosh! This is just crazy. I can't believe how hard this is." You want to be careful and you don't want to belittle them and say, "Really?"

Lawrence: For sure. Yeah. Sorry, go ahead.

Tim: Well, I was just going to say you have to find a way to, on the one hand, keep encouraging them and complimenting them that they are working hard, at

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least in their mind. But also encourage them too that they can do even better and make even more progress. You got to watch for those things.

Lawrence: It was very funny when I was told that for another trainer who has a bit of reputation for being a bit of a nice guy, a little bit lower intensity. He is working on increasing that. It was good feedback for me because it made me think. One of the things I'm really interested in at the moment, and this is something we've definitely talked about in the series, is trying to find the Goldilocks intensity for the individual. We have an intensity rating that we borrow from [Discover Strength](#) in terms of giving each client a number so we can make sure we adapt the experience to them. Obviously, in some cases you push them too hard like you say it would scare them off. Obviously, if someone doesn't train that's worse than training even of moderate intensity.

I know we need to wrap up. I just want to say a couple of things just to couple some of the things you said. Regarding advanced techniques, I know one organization who were telling me that they realized they rely too much on advanced techniques. They were so into them that they rely too much on them in a workout. It took away from that focus on the effectiveness of the set of the exercise which I thought was fascinating. They actually put a strategy in place to retrain their team in order to get better at really focusing on that first set of muscular failure.

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Just for people thinking how do they measure this? The way we do it is we don't measure the advanced techniques. We measure the first set and then whatever we throw them after that doesn't get measured. The reason we do that is because it will just make the workout card too complicated. Sometimes we'll make notes about that in a separate note section. And then the last thing is just making sure that we adapt the intensity to the individual.

Now, I'm just looking at the bullets, Tim. I don't think we actually finished the first one but that's okay because this has been an awesome podcast. We've got on some really cool tangents. I don't think advanced techniques are on our list here so we kind of covered a lot of that off today. What I'd like to do is maybe finish off the first bullet regarding determining the optimal weight in the next episode together. Because I think one of the questions we need to answer is when you get a new client, how do you find out exactly what weight you should use with that person? That is going to be a long conversation so let's do that next time. What's the best way for people to connect with you to find out more about your services? And you need to wrap up for a client now.

Tim: I would say probably the best approach is just to go to my website which is stronglifetraining.com. Through the website my phone number is listed there, there's an email address listed there, there is a contact form listed

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there. Whether they want to call me, send me an email, or just fill out the contact form through the website, that's probably the best approach.

Lawrence: Awesome. Okay. Alright, thank you very much for that and looking forward to Part 6 and many more as well to cover the rest of these awesome bullets that we got here.

For everyone listening, to find the blog post for this episode and the blogpost for this entire series so far, and to download the PDF transcript for this episode, please go to highintensitybusiness.com, click 'podcast', search for episode 361. Until next time. Thank you very much for listening.