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In the off chance that someone reading POWER doesn't know who you are, please tell us a bit about yourself.

I'm Mike Tuchscherer and I'm 29 years old. I compete in the 120 kg / 264 lbs weight class. My best unequipped lifts in competition are a 785 lbs squat, a 480 lbs bench, and an 850 lbs deadlift. I've won USAPL Nationals 8 times. In 2009, I became the first male from USA Powerlifting to win a gold medal for Powerlifting at the World Games. I am also the founder of Reactive Training Systems, a powerlifting training and education company that focuses on auto-regulation (which I'm sure we'll discuss more in a bit).

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You forgot the part about holding the IPF world record unequipped deadlift in the 120 kg class! What do you do for a living?

I'm the owner of Reactive Training Systems. Most of my job is coaching other powerlifters through our various coaching programs, but my work also heavily involves myself in education. One of the ways that I do that is by teaching a class in RTS Classroom. RTS Classroom is an online webinar-based class where we teach all kinds of things from program design to psychology of training. The way that technology is today, we can even cover technique work. It's really a pretty cool thing.

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Before you were a household name in the powerlifting world, I simply knew you as "Power275" on YouTube. You were a relatively unknown guy putting up huge lifts in a crappy commercial gym. Just how long have you been training for powerlifting?

Haha, yeah I remember those days. I've been training for powerlifting since 1997. Back then, I was a powerlifter at heart who played football in the off season. I started posting workouts online probably around 2007 when I was graduating from the Air Force Academy as a way to keep in touch with my buddies from the team.

When did you start lifting weights?

Did you have an athletic background prior to powerlifting?

I started lifting in '97 or maybe just before. Initially, it was to be a football player. But I found out thst I was good at it and it really developed into a passion. I didn't start at any crazy strength levels and I don't remember what I did the first time I benched, but I do remember having to train a bit to bench 135 pounds. I remember that being a big deal -- one "big boy" plate on each side. I played some sports growing up, but I probably wasn't that athletic. I played baseball for a while and football, too. Once I got into high school, I focused on football and lifting weights.

You were a top single-ply lifter

-what makes that all the more impressive is that you trained on your own. You even had some videos about how to put on a bench shirt by yourself! But then you pretty much quit equipped lifting cold turkey. When and why did you make the switch to raw lifting?

The whole reason I got into Powerlifting was to be a strong guy. I never liked the suits and shirts much, but I did it because I wanted to compete on an international level. After winning the World Games in 2009 (as close to the Olympics as you can get in Powerlifting), I wanted to shift gears a bit. Raw Unity was getting big at the time so I thought I'd take a season and do some raw meets. At the end of that season, the IPF opened an Unequipped World Championship. That was it for me -- a way to compete internationally and drug tested without equipment. I signed up immediately and haven't really looked back.

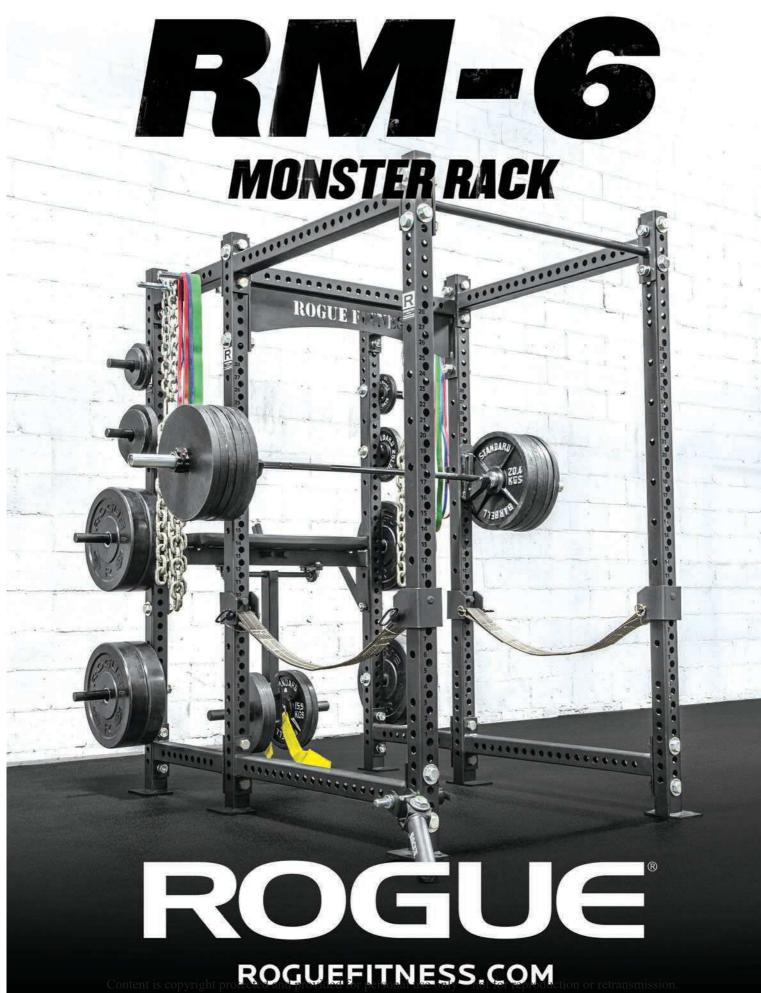
Have you ever thought about making a return to single-ply lifting? Maybe throw on some equipment and jump into IPF Worlds?

I had a friend who really wanted me to try single-ply lifting again a few years ago. At the time, I was training alone again and the thought of spending an extra hour each session, struggling to get in and out of the gear and not knowing if a training cycle was effective because I'd dropped 3 pounds and now the suit fits differently - it was just not appealing to me. That said. I wouldn't rule it out at all. If the situation was right, I'd do it. I'd really love to go back to the World Games -- it was by far the most epic sporting event I've ever been a part of. But for now, I really enjoy raw training and since there's an unequipped IPF Worlds, I've got plenty of competition.

Let's switch gears from geared lifting and talk about training. You created the Reactive Training System (RTS). Describe RTS for us in one sentence.

RTS is all about listening to the signals that your body gives you and adjusting your training appropriately. So that's one sentence, but since I can't leave that well enough alone, I'll add another layer to it! Every good training program that has existed has employed

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some auto-regulation techniques. Many of them use the eye of a very experienced and knowledgeable coach. If you don't have that, or if you just want to refine your coach's eye and communicate more clearly, then the tools that we teach offer you that ability.

A big part of RTS is the RPE scale, which stands for Rate of Perceived Exertion. What is the RPE scale and how do you use it in your training?

RPE basically means "how hard did it feel," but not in a hyper emotional way. I'm not asking about your innermost feelings, I'm asking about performance. Another way to look at it is "reps in reserve." It's on a scale of 1-10 with 10 being maximum effort (no reps in reserve). But say you do a set of 5 and when you put the bar down you say, "Yeah, I could have done one more rep." We'd call that a 9 RPE. This allows us to do some really cool stuff. First, we can communicate clearly. If you say, "Jeez, that felt heavy," it's hard to know how "heavy" is heavy. How "easy" is easy? On the other hand, if you say, "that set was @8 RPE" then I know exactly how hard it was for you.

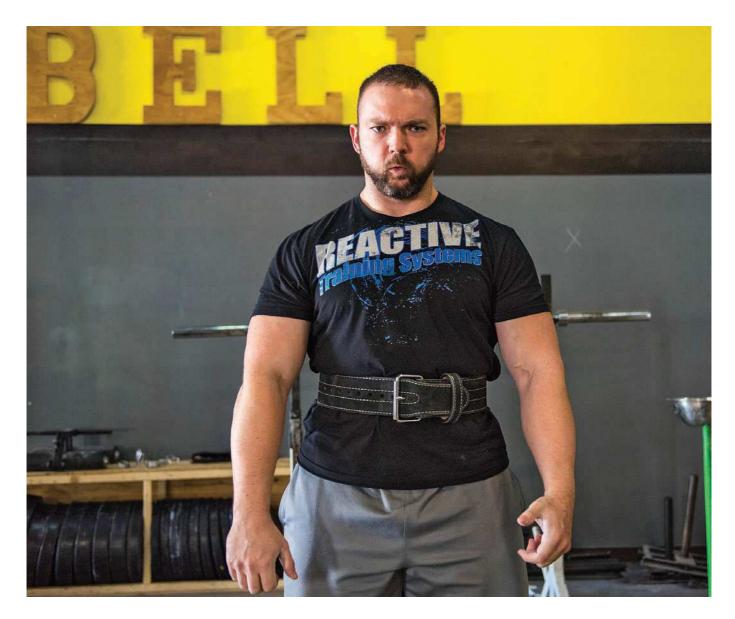
But it does more than just communication. It also does auto-regulation. If you use this tool, the weight on the bar will automatically adjust up or down to your capabilities of the day. I'll send guys to the gym with instructions to squat up to 3 reps at a 9 RPE. If they're strong that day, it takes more weight to produce a 9 RPE. If they're off, the weight will automatically be less. The thing is that top coaches have adjusted the weights of their athletes since forever. But it takes decades of experience and a close relationship to be able to read athletes that way. The RPE system gives this kind of ability to lifters who don't have a great coach in the gym with them. And it helps coaches get a better understanding of their athletes.

You're known for using a 'tendo unit in your training, which is obviously short for Nintendo unit. I played Nintendo a lot as a kid, but it never made me any stronger! How do you use the 'tendo unit? Do you use it together with the RPE scale, or is it an either/or type of thing?

Mostly by playing Track & Field. Man, running on that stupid pad will make you so fast! (Just kidding, it will probably make you worse at everything in life.)

The Tendo measures bar speed. A hard lift moves slower than an easy lift (up to a point). I've used this thing for years and I've eventually settled as far as using it in training. I use it as a

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tie-breaker for RPE. So if I get done with a set and think, "Was that @8 or @9 RPE?" I'll use the tendo to help me decide. For consistent lifters it works pretty well. It's useful feedback. Video is another great feedback tool that you can use almost the same way. Plus, video is very reliable, relatively cheap, and can take into account things like technique errors (which the Tendo can't).

How many times per week do you train? And how are those training days laid out?

Right now, I'm training four days per week, though that will probably go back up to five days soon. What I train on which days varies, but in a full training block, I'll be squatting three times per week, deadlifting twice per week and benching four to five times per week. I have no qualms about going heavy either. During meet preps, I'll sometimes go up to a second attempt single. I'm often over 90%. Once you get used to the high intensity, it isn't that big of a deal. I think the reason people find lifting 90%+ weights to be stressful is because they don't do it very often, so they aren't used to it. It becomes a kind of self-fulfilling prophecy.

How are you able to train the competition lifts as often as you do? Was it something you had to work up to? Do you do soft tissue, mobility, or recovery work?

Training frequently is something I evolved into and I recommend that others do the same. I used to train with more conventional frequencies (upper/ lower splits and so on). I developed into the higher frequencies and gained a lot of strength and surprisingly size too from doing it. It's not something that you want to jump into cold turkey though. It's not that it won't work or that you'll get hurt -- most people can make the adaptation if they stick to it long enough. I just think phasing into higher frequencies over a long time is better for a lifter's career. I do some soft tissue work, but probably not as much as I should. That's a tricky thing, though, as you're robbing Peter to pay Paul. You can neglect things like soft tissue work for a while, but eventually you have to pay back that debt.

Assistance work. Do you do it?

Haha! Depends on what you call assistance work! I do train movements other than the contest lifts but it's important to remember that the further you get away from the contest lifts, the more you'll lose in the transfer (i.e. wasted effort). So when I do "assistance work", it's things like Pause

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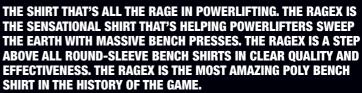
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Squats, Deadlift + chain, or Pin Presses from chest level. They are very close to the contest lift with maybe one or two variables changed to target a weak ROM [Range of Motion] or specific skill.

That leads right into my next question. It seems to me that there are three ways to modify the competition lifts: #1 change the resistance (e.g. add bands or chains), #2 change the range of motion (e.g. deficit deadlifts or board presses), and #3 change the tempo (e.g. add a pause at some part of the lift). What are your thoughts on each of these methods?

Yeah, those three methods are probably the most reliable and direct ways to change the contest movement. Bondarchuk identifies five criteria to Dynamic Correspondence, which is basically what we're talking about here. (1) So changing the resistance as in bands and chains is like changing the accentuated region of force production. (2) Changing ROM, like deficit DL or board work, fits in the category of changing Amplitude and Direction of Movement. Something else that fits here is Incline bench or Military press. (3) Then changing the tempo fits in the category of Dynamics of Effort. This is about how you try to move the bar. So if you add a long pause, that changes how you try to move the bar.

There are two remaining categories. One is Rate and Time to Maximal Force Production, which is how quickly you get to Fmax [maximum force]. Think of a deadlift where you slowly squeeze the bar and accelerate it once you get it moving. Compared to a deadlift where you just rip it off of the floor as fast as possible, the former has a longer time to Fmax. It's similar to Dynamics of Effort, but not the same. Then lastly there is The Regime of Muscular Work. The easiest way to think of this is with repetitions – if you're a powerlifter, you compete doing singles. So, if you're training for 5's, then the Regime of Muscular Work is different. All that means is that the lift is less specific and it will require more transference. That's why a gain in your 5RM is more likely to translate to increased contest results than a gain in your 10RM.

It's worth mentioning that many exercises fit more than one of these categories. Take bands for example – yes, they change the accentuated region of force production. They also affect rate and time to Fmax. Lots of movements can affect more than one variable.

How do you go about building the competition lifts and bringing up weak points?

When it comes to weak points, we don't have to be fancy. Often times, simple works best. So rather than trying to identify a weak muscle, we focus on a weak range of motion. Weak muscles can be misleading. It's often

36 JANUARY HEBRORRY Solver the protected and provided for personal use only - not for reproduction or retransmission. For reprints please contact the Publisher. very hard to diagnose - it's rarely just one muscle in isolation, and even if you could identify the exact weak muscle, the best fix would look exactly the same as it would if you had been looking at weak ROM anyway. So just cut out the middle man and target the weak ROM. So for example, if you identify that your weak ROM is the bottom of the squat and you train it with pause squats - it doesn't matter if the weak muscle is glutes, quads, or something else. It might not even be muscular at all but just a lack of skill in maintaining tightness in the bottom. The exact reason doesn't matter because if you're weak in the bottom, the pause squat will fix it. It's pretty specific, so it will develop all of those skills the exact way that they're needed to squat. I think that's an important thing people tend to forget. The competition lifts won't develop you in perfect balance, but they get pretty damn close. Think about it -- what exercise trains your hamstrings in EXACTLY the way they need to be trained to deadlift, even considering your individual nuances in stance

width, toe angle, and all the rest? The deadlift! Training the deadlift will be the most specific training you can do.

To summarize, the competition lifts are specific to the competition lifts. But some argue that such specificity in training can be a downfall and that it will lead to imbalances and injuries. What do you have to say about that? For the purpose of powerlifting, is there a need to train a wide variety of movements in order to develop everything in balance and avoid injuries due to training the exact same movement patterns over and over again?

I think it's worthwhile to use a wide variety of movements for beginner and intermediate lifters. It doesn't take a tremendous volume of specific work for these lifters to make progress, so using a wide variety does keep things in balance and develops work capacity. As you develop as a lifter, it takes more and more stress to make further gains. This is the principle of overload. You have to lift heavier weights to bench 300 than you do to bench 200. And it's got to be more than just lifting heavier -- you'll have to gradually do more volume, too. That's just the nature of it. We're not talking about more volume all of the time - deload weeks are still beneficial. But over the years, it will take gradually more and more work to produce continued results. At some point, usually around intermediate stages, it takes more work than the lifter has time or energy to do, so we begin the process of specialization. We start dropping the stuff that doesn't contribute to the total. At first it might be dropping some running or energy system training. Later, you start dropping movements that tax the prime movers in non-specific ways (things like GHRs [Glute Ham Raises] or triceps extensions). All of this is to make room for more specific work that you need to continue to improve. If you don't need to drop it, then don't. But when progress stalls and things need to change, that's the direction to change them in.

Have you ever been injured? What measures do you take to stay injury-free?



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Yes, but fortunately not severely. I've had lots of strains over the years (calves, hamstrings, back, pec, etc). I've sprained my SI [Sacroiliac] joint quite a few times. A few others too. I can't say conclusively what keeps me injury-free, but of all the times that I've been injured, the common thread is not auto-regulating my training. That may sound ironic because I'm supposed to be all about auto-regulation. Well, I screw it up sometimes too. For instance, the last time I was at Super Training Gym, I sprained my SI joint deadlifting heavy. I should have known better as I was driving in a car for 13 hours the day before. I strained my hamstring about 2-3 weeks out from the World Championship in 2012. I was having a crappy workout and on any other day, I would have

bagged it and lived to fight another day. But that day I didn't because, damn, I'm 2 weeks out from the first ever IPF Raw Worlds! Of course I'm training! Well, that wasn't smart and it cost me. Then most recently I was pushing for a big meet and really did too much volume for a long time. I didn't back off because I was pushing for this meet. I didn't suffer an acute injury, but I'm still dealing with irritated tendons and stuff -- even now months later.

I have been able to stay fairly injury free and in large part I think that's because I DO have systems in place to keep me from doing dumb stuff. It's when I don't listen to those systems that I get in trouble.

Do you ever deload? If so, is this auto-regulated in some way? What

do your deloads entail?

Yes. This is new-ish for me too. Deloading was always justified to me as a way to let your body recover after three weeks of pushing hard. That never made sense to me as it seemed like the problem was poor stress management rather than a need to deload. But there are other reasons for deloading, too. The big thing is that it naturally helps to vary your training volume. This helps a couple of ways. Volume variance helps to improve your work capacity over time. As we discussed earlier, you'll have to do more volume to continue making progress, but that's not going to work if you can't recover from the volume. By varying your training volumes and building work capacity over time, you improve your ability to

38 JANCAREPTEBROARTISht protected and provided for personal use only - not for reproduction or retransmission. For reprints please contact the Publisher. recover. The other thing that deloading can do is to restore a bit of sensitivity to training volume. So you get a bit of a double benefit there. It improves your work capacity so you can handle more volume in the future. But it also allows you to get all of the gains that you can from the volume you're doing now.

We do auto-regulate them in some ways, mostly based off watching the lifter's progress. When the progress slows from what it normally would be, we *MAY* try a deload or a transition phase (basically a longer deload) to see if we can maintain strength while restoring some volume sensitivity.

Deloads usually don't feel like deloads. At least that's what my lifters tell me. We still go pretty heavy. We just do minimal volume and probably drop a workout, too. So the work you do is still work, but you just don't do much of it. Lower level lifters tend to need longer deloads, but they need them less frequently. Advanced lifters need more frequent deloads, but they are much shorter -- at very high levels, maybe only a few days. Well, I feel like we've covered training pretty thoroughly! Let's briefly cover nutrition. You're a solid 264 lbs. What does your diet look like? Are you as meticulous with your diet as you are with training? Do you have any top secret tricks you use when it comes to nutrition?

My nutrition is very simple. I think that in terms of priorities, training is much more important for a powerlifter than nutrition. So when it comes to nutrition, I try to keep it simple enough to follow in real life. First, I manage my calories to manage my weight. If I need to gain weight, I eat more calories. If I need to lose weight, I eat less calories. My second priority is to get enough protein. The general rule I follow is 1 g/lb up to about 220 grams per day. If I get to 220 g per day, I'm doing quite well. I cap it at 220 g per day because I find it really difficult to get more and myself and my lifters tend to not feel so great if we go beyond that 220 g mark. That seems to be plenty for our purposes anyway. I'm sure there are other priorities after that, but for most of us, that's

about all we have attention for.

And now, the question everyone wants to know the answer to: how do you manage to pass IPF drug tests?

Haha. Seriously though, the best way to pass an IPF drug test is to actually follow all of the rules on banned substances. I don't mess around with anabolics or any of that stuff because, frankly, it scares me. Now if someone else wants to take anabolics, that's up to them. I'm just glad that there are places where everyone agrees to the rules of competing without it. Of course, some will cheat, and some of them get caught too. But I'm glad there is a place to compete where the standard is to abstain from those substances.

Where can people find out more about you?

You can find more information about Reactive Training Systems, including tons of free articles, training programs, educational tools and a strong community at www.ReactiveTrainingSystems. com. **PM**



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