

## STATS

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Stats are always important to success. All ball teams keep stats, and they are invaluable to a team's success. European weight lifting coaches kept many stats on how many lifts should be performed, what percent of 1-rep max is optimal, what constitutes speed strength and strength speed, what percentage to use for a circa-max cycle, how many box jumps to do per workout, and how to calculate volume. Let's look at some very important stats for a powerlifter.

Before going into some boring facts about powerlifting, I would like to acknowledge some former Soviet coaches that helped me formulate the method of training we use, commonly known as the Westside system. First, I would like to thank the late Prof. Mel C. Siff. I had many conversations with Mel, as well as co-speaking at seminars with him. He had great insight and knowledge about training. I first gained my training knowledge from Ohio's greats, which are Anello, Crawford, and Pacifico. I picked up vast knowledge from Zatsirovsky, Roman, Vorobyev, Ozolin, Matveyen, Kusnetsov, Komi, Kuntz, Berger, and Verkhoshansky, for his jumping and shock expertise, and last but not least, Jim Wendler, for saying that Westside is nothing special, it's just the atmosphere. Jim, like many others, was handed a successful system that has been evolving long before he arrived at Westside, to develop a system of box squatting, board pressing, floor pressing, training by percents, band and chain training, circa-max phase, three-week pendulum waves, and now foam training. If Jim would have been at Westside in 1983 when I started implementing the research by A.S. Prilepin published in 1974, then learning about reactive methods, overspeed eccentrics, virtual force effect, and all of the methods mentioned above, he might realize beyond attitude there was aptitude. One will never learn to train until he is injured or stuck at a plateau. The first to say this was Vasily Alexeev, the greatest weight lifter of all time.

Now about those stats, my first experience with true stats was A.S. Prilepin's 1974 research mentioned in the book *Managing the Training of Weight Lifters* by Laputin and Oleshko, which showed that the following numbers of lifts are optimal.

Percentage	Reps	Optimal number of lifts
70%	3-6	18
80%	2-4	15
90%	1-2	7-10

Prilepin recommended the following number of lifts:

70%: no less than 12 and no more than 24

80%: no less than 10 and no more than 20

90%: no less than 4 and no more than 10

I suggest following the optimal number of lifts for a certain percentage.

For those strong enough to do the circa-max phase use 7 or 8 lifts at 90-97% of a 1-rep max. A circa-max phase should last two weeks.

Week 1: 2 or 3 sets of 2 reps plus 1 or 2 singles

Week 2: 2 sets of 2 reps and 2 or 3 singles for a new box squat record

Example: Matt, an OSU student, made his first official 800 squat drug-free. His 2-week circa-max phase looked like this:

Week 1	Week 2
315x2	315x2
365x2	365x2
405x2	415x1
465x1	475x1
375 pounds of band tension	510x1

This was off of a parallel box with contest gear, straps down, and no knee wraps.

### **Relative Parameters**

For an 800 contest squat: 500 bar weight plus 375 band weight

900 contest squat: 600 bar weight plus 375 band weight

1000 contest squat: 600 bar weight plus 440 band weight

1100 contest squat: 660 bar weight plus 500 band weight

You must have good form and no obvious muscle weaknesses. You must be very strong but also very explosive.

For speed strength, for a power or Olympic lifter and even a sportsman, do box squats with 40-45% bar weight plus band tension in the bottom of 10% and at the top, 20%. For example, Chuck Vogelpohl would do speed squats with 405-455 in a 3-week wave with one set of strong Jump-Stretch bands. They equal 100 pounds in the bottom and 200 pounds at the top. At that time, his squat was 1000 pounds. You do the math. A 500-pound squatter would do half the bar weight and half the band tension. Nine sets of 2 reps is optimal.

For speed benching roughly 40% band tension at the top of the lift is used. For example, Fred Boldt has a contest best of 655 at 181 body weight. His floor press is 480 pounds, and his speed bench weight is 205 pounds, which equals roughly 40% bar weight and 40% band tension at the top. Because the bench speed strength weight is so light, 8 sets of 3 reps, the maximal number of lifts in the 70% range, is used. The system develops a fast rate of force development.

### **The Maximal Effort Method**

This method is exercising with maximal resistance with weight or a combination of weight and bands or chains. This means to lift a maximal weight with no time limit. This workout should occur 72 hours after speed work. I find it far superior to the method of heavy efforts, which means 2 or 3 reps with a slightly less than maximal effort. I want the highest intensity as possible, which means a max single depending on your level of preparedness. This method is superior for improving both intramuscular and intermuscular coordination. If you want to squat 1100, you must train for an 1100-pound squat. The muscles and the central nervous system adapt only to the load placed upon them (V. M. Zatsiorsky, *The Science and Practice of Strength Training*). When training weights exceed 90% for 3 weeks, the CNS will fail. Westside uses the conjugate sequence system. Every week we max out, but on a different bar exercise. This eliminates the stress on the CNS. We also use a 3-week pendulum wave. Westside had three men squat their first 804 by using a 3-week wave with 120 pounds of chains.

Week 1: 405 x 8 sets of 2 reps

Week 2: 440 x 8 sets of 2 reps

Week 3: 480 x 6 sets of 2 reps

This was around 1995. This work was done on Fridays; Monday was max effort day. For strength speed, the band tension should be as great as or greater than the bar weight. This system builds absolute strength. The bar may move very slowly, producing a very high rate of force production. Because the total weight is almost 100%, the number of lifts should be 6-8 singles. This is very hard work. Wear whatever gear you desire, no straps, no knee wraps. One cannot use just weight or just bands.

When training with band tension, because of shrinkage, the tension can be too light in the bottom. This can cause momentum at the start, producing very little resistance at the start of the lift. Only bar weight can be too heavy at the start, leading to bar deceleration. Only a combination of bands and bar weight can solve the perpetual problem of having a perfect weight at the start and the finish without bar deceleration. This is accommodating resistance.

### **Overspeed Eccentrics**

Using bands to pull you downward at a faster rate than normal will produce a virtual force effect: a force that is there but not recognized. If you can triple velocity, you can produce nine times more kinetic energy. Of course, you can't triple the eccentric phase, but by increasing it, the stretch reflex is greatly increased.

A different reactive method is the lightened, or future, method, as the Soviets defined it: allowing one to lift a weight now that will be lifted in the near future.

### **Interval Training**

Interval training was common in track, but not with weights. I realized its benefits for football teams at first. Interval training is doing a particular amount of work, with a predetermined amount of rest, for example, 8 to 12 sets of 2 reps, work time 4 to 8 seconds of work, with 40 seconds of rest between sets. Sounds like football to me. This works perfectly for power or Olympic lifting. It builds GPP plus with the correct percent builds a fast rate of force development. The multiple sets are associated with the dynamic effort.

### **Maximal Effort Method: Application**

Doing a max single is much more effective than a set of 3 reps with 90% with weights.

Light Efforts	Medium Efforts	High Efforts
70% weight	80% weight	90% weight

When 2 reps can be completed for a few sets, this is circa-max, or near-maximal, efforts. Only in special exercise is more than 1 rep preferred. At Westside, maximal effort is meant to mean the most weight lifted for 1 rep, hopefully a new personal record, but at least the most that can be lifted depending on your level of preparedness. This is the Bulgarian max effort system. I prefer a 1-rep max, hopefully exceeding an all-time max. This aids in reassuring your mental and emotional state, proving that you are stronger. Just like a contest. Try a weight around 90% and a weight just below or a small personal record then a third lift for a new personal record and a small second personal record. This is exactly like a power contest. My 25 years of data on max effort training shows more lifts of 90-100% plus lead to injury or overtraining. You have all read about maximal effort training in texts like *Science and Practice of Strength Training*, but remember, they are referring to Olympic lifting. The time under tension is much less than the power lifts. Also the power lifts are much heavier, leading to much higher training volume. If you want to increase your rate of force development, jump, bound, or try plyometrics. Our job as powerlifters is to lift as heavy a weight as possible.

I would like to acknowledge the research of Rach (1956), Henry (1960), and Whitely. The role of strength becomes more important as the load increases. An increase in strength has no effect on speed of movement if the external resistance is small (M. Siff, *Supertraining*). This simply means you must train at a high percent of a 1-rep max most of the time. That is why approximately 50% of your volume must be between 75% and 85% of 1-rep max. A. D. Ermakov and N. S. Atanasov's data in 1975 (*Managing the Training of the Weight Lifter*) showed that only about 19% of the barbell training was less than 70%. These relative loads should be higher because the power lifts are somewhat slower to complete. As far back as 1938 Hill's equation was most widely used to explain this phenomenon. Also refer to Perrine and Edgerton's 1978 research. The last 25 years of research at Westside, which has developed over 80 Elite lifters, has benefitted from the knowledge of Dr. G. Sanger, Dr. T. Paulucci, Dr. S. White, Dr. B. Whittaker, Dr. M. Liggett, Dr. Akita, a calculus professor, Dr. Joe Dellaquila, a physics professor, and Doug Ebert, an engineer from Virginia. Doug Heath and Matt Dimel were our first world record holders in the bench

and squat, respectively. I thank Dave Tate, Chuck Vogelpohl, George Halbert, and many more for constructing our current system. I also thank my good tattooed friend Jim Wendler, who pointed out the fact that Westside does have a special attitude, and also a special aptitude for training.

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