

The Importance of Volume

By: Louie Simmons

How important is controlling volume? What about the range of intensity. These are issues seldom addressed by today's lifters. I found out the hard way that the volume at a particular intensity range must be closely adhered to; not only the total number of lifts, but also the number of lifts per set should be calculated. This was brought to my attention by A. S. Prilepin's research in 1974. His recommendations were as follow.

Percent	# of Reps	#Lifts Per Workout	Optimal # per Workout
70%	3-5	12-24	18
80%	2-4	10-20	15
90%	1-2	4-10	7

If the number of lifts deviates significantly from optimal, a decrease in training effect occurs. This information is found in *Managing the Training of Weightlifters* by Laputin and Oleshko.

Let's look at a simple example. The number of lifts are to be performed on one of two training days. The light percents are for the development of explosive, or speed, strength. A few years ago we were using between 50% and 60% of a contest max in the squat. Three lifters used 400 for 12 sets of 2 reps. That equals 9600 pounds of work at 50% of an 800 squat. At 60% the lifts were reduced to 20. It was broken down to 10 sets of 2 reps at 60%. That represents 480 pounds for 10 sets of 2 reps, or 9600 pounds. All three lifters squatted 804.

A 700 pound squatter would use 350 (50%) for 12 sets of 2 reps, which is 8400 pounds of volume. At 60% 10 sets of 2 reps are done or 420 pounds for 20 lifts, which equals 8400. A 500 pound squatter would use 250 for 12 sets of 2 reps, which equals 6000 pounds of work. At 60% 10 sets of 2 reps are performed or 300 pounds for 20 lifts, which equals 6000 pounds of volume. I hope you can understand how important controlling the number of lifts at a certain intensity can be. The squats were done off a parallel box with 40 pounds of chain at the top.

On max effort day, three days later, we use the conjugate method, where core exercises that are similar to the classical lifts are performed. Good mornings of many types, special squat bars, and other apparatus are employed, but we never do a regular squat.

Start increasing the bar weight after a good warm-up. Do a lift of about 90%, then try a personal record, and maybe one more, and then do your assistance work. If you look at both days, it looks like this: 80 lifts for explosive and speed strength and 12 lifts for strength speed and absolute strength per month. Remember, this represents training only the classic lifts. But it is easy to see a direct correlation between a contest max and volume trained at the correct intensity zones.

A Very important factor is special exercises. The coach, who is many times the lifter himself, must find any weaknesses, i.e., a lagging muscle group. For squatting or deadlifting, the posterior chain must be developed: hamstrings, glutes, all back muscles, hips. At Westside this means the total work is distributed like this: 40% Special exercises for Strength, 40% Barbell Lifts, and 20% Restoration and Flexibility. This will sometimes amount to 14 workouts per week. Close to contest time we do fewer barbell lifts and raise special work where needed.

If your squat is stalled, more squatting won't help. You may need more back work or more ham/glute work. In the real world, a squat does not distribute the work evenly. If it did, injury would

seldom occur. When reaching your highest potential, doing more classical lifts will only disturb good Form.

The same holds true for deadlifting, with even less deadlifting being performed. Training with a barbell held in the hands taxes the CNS heavily. This could lead to a negative training result. This is why we complement the deadlift with many variations of squatting and good mornings. Deadlifting is done with no more than 70% and only for singles. The intensity is raised by using short rest periods between sets, about 30 seconds when doing 6-10 total lifts.

Learn the difference between training and testing the deadlift or squat. Obtain a box squat PR with added bands that represents your contest squat. A low box squat with the Safety Squat bar is a real indicator of absolute strength for squatting and deadlifting. This is done on our max effort day. Remember, if you squat 300 pounds, use 150-180 pounds on a box starting at 50% in a 3-week wave and ending at 60%. On weeks 1 and 2 do 12 sets of 2 reps, while on the third reduce the sets to 10. The bar volume is always the same, 3600, but the total volume increases during the 3 weeks by adjusting to new special exercises. With a little math, regardless what you squat, the volume is customized for your top lift. At the same time, you are perfecting your form, raising your work capacity, and bringing up your lagging muscle groups.

In 1995, Zatsiorsky stated three methods of inducing maximal muscle tension.

- Overcoming maximal resistance that causes maximal or near maximal muscle tension (maximal effort method).
- Using considerably less than maximal resistance until fatigue causes one to fail (repetition method).
- Using sub maximal weights accompanied by maximal speed (dynamic method).

All three must be monitored at all times during the year. This explanation may seem simple to some, or possibly too complicated for others. The keys to success are as follows:

- Match volume with correct intensity. Refer to Prilepin's intensity chart.
- Use a max effort day and, 72 hours later, a dynamic method day.
- Raise work capacity.

I have often been asked why is a high work capacity so important. If you are in shape, the heavy weights and the high-volume training will have little negative effect on the lifter. If you are physically fragile, the training will affect you mentally as well as physically.

To calculate volume on max effort workouts, there are two methods to consider. The first is when the objective is to increase muscle mass in order to move into a higher weight class: 6-8 lifts in the 90% range. The second method is 3 or 4 sets of 2 reps, the second at 90% and then the next one or two a PR. We prefer the second method, from a psychological point of view. Regardless of how close it is to a meet, or right after, try a record. A record is a process of time under tension. That is most important here. How long it takes to complete a max lift must be duplicated with special core exercises such as good mornings or deadlifts.

For ball players or Olympic lifters the percent for squatting is 65-80% for dynamic day. The same procedure for max effort is used as explained earlier, because we don't wear supportive gear on this day.

For benching on dynamic day the percent of a meet max with a shirt is roughly 40%, plus chains. If no chains or bands are added, use 50% of a shirtless max. If your max is 300, do 8 sets of 3 reps using 150 pounds. That's 450 per set, for a total of 3600 pounds of volume. With a 500 max, do 8 sets of 3 reps with 250. That's 750 per set, times 8 sets equals 6000 pounds of barbell volume. Remember, this is a no-shirt bench. As you can see, regardless of your bench max, the percent and the number of lifts stay the same, but the volume is constantly increasing.

We don't record special exercises volume, but it must be constantly increasing in sets and top weight. Train special exercises in the correct sequence. For the dead-lift and squat, work low back, ham/glutes, abs, in that order. Don't move on to the next exercise until muscles are thoroughly worked. For the bench, do triceps, lats, upper back, rear and side delts. The most essential muscle group must be the strongest or injuries will occur.

For bench max effort work, the same principles apply as for the squat and deadlift. On max effort day, the conjugate method must be used, i.e., using exercises that are mechanically similar to the classical lifts. Rotate to a different exercise each week. This allows you to lift 100% plus each week.

None of the above can happen when using the progressive gradual overload system. Please give it up. It just doesn't add up.