REACTIVE METHODS

Louie Simmons

In the late 1960s isometrics were used not only by the Soviets but also here in the United States by the York Barbell team. They were very effective but were overused, without mixing other types of resistance. Plyometrics are overused and misunderstood in most cases. They should be just a small part of training for explosive strength.

Most kids jump rope, a simple form of plyos. Yes, it is very important to develop power quickly, but it is also important to maintain power for sports such as football, wrestling, and some running events. All ball players run fast and slow and have quick changes in direction. This is very taxing on the central nervous system. If one wants to become more explosive, he or she must raise maximum strength.

At Westside it is common to see Chester Stafford jump onto a 35 inch box with a pair of 70 pound dumbbells at a bodyweight of 290, or to see Andre Henry, at 460, jump onto a 20 inch box with a 160 pound weight vest on. Neither man had a previous plyometric background. How did they do it?

Many strength coaches call me about power and speed training, but very few ask about building absolute strength. If your reactive strength grows, your jumping and running ability will increase. That is why men can outperform women in the 100 meter, shot put, basketball, football, and lifting weights. Most coaches are constantly working on

speed and quickness, but that's the trait they recruited. Why constantly work on what they already have? Most stay away from heavy weight training for fear of overtaxing their athletes. However, when running full speed, 4, 5, and sometimes 6 times bodyweight is produced during foot contact, while a 300 pound lineman is lucky to squat twice his bodyweight. Relative strength is much lower for large men compared with smaller, lighter men.

Phil Harrington, the world record holder in the squat at 900 at a bodyweight of 181, can also jump onto a 50 inch box. As his squat increased, so did his box jump. When Jud Logan, the Olympic hammer thrower, failed to increase, he employed box jumps to push his throws to new lengths. He had a 440 powerclean and a back squat of about 770 pounds. His box jump was an incredible 55 inches at 285 bodyweight. Jud, like Westsiders, was already strong, and used box jumps for quickness to increase his throws, just like Westside uses the jumps to increase our squat and deadlift.

What about lifters and other athletes who aren't very strong? How can they increase their explosive power? By using the reactive method. Here's how.

One reacive method exercise is weight releasers. Here, extra weight is added to the bar on the eccentric phase by the use of weight releasers. It is common to lower 80% of your 1-rep max and raise 60%.

This is done by putting 20% of the load on the weight releasers. As they release the load, the body reacts to the sudden reduction of weight, then accelerates concentrically to completion. The lifter reacts as if the original 80% was on the bar. This develops maximum acceleration and reversal strength. The eccentric phase should be as fast as possible, preferably five- to six-tenths of a second. Lowering slowly will build only muscle size and causes most muscular soreness. The squats are done for 2 reps, 6-10 sets. This method is frequently used by Matt Smith (2600 at SHW) and John Stafford (2437 at 275).

Basically the same method is used for bench pressing. We do 6-10 sets of 3 reps. Of course only the first rep is a contrast rep, as the weight releaser device falls off. This is good because eccentric work causes the most muscle soreness due to muscle spindle damage.

A second method for contrasting a load is the lightened method. At Westside a strong pair of Jump-Stretch bands are attached to our 7-foot power rack at the top. In the bottom of a squat, 135 pounds weighs zero. By adding 90 pounds to the bar, it now weighs 90 pounds at the bottom, but 225 at the top. By adding a second set of 45 pounds, the weight at the top is 315 pounds and 180 at the bottom. Your brain quickly learns that the load, while very light in the bottom, becomes quite heavy at the top. This teaches one to accelerate maximally to completion. This conditions one not to decelerate near completion,

which occurs with just barbell weight.

This system was first used in youth training overseas. If one could squat only 90 pounds, the load would seem light in the bottom after starting at the top with 225. Unlike the weight releaser system, the total load is reloaded as one stands. An extreme setup would look like this: Fix the bands so that there is 250 pounds less at the bottom of a squat. Load the bar to 1000 pounds. Set up with the 1000 pounds. The weight becomes lighter as one descends to the bottom until it is reduced to 750 pounds. The weight reduction is caused by the bands supporting part of the load. Then return to the top. As the weight is raised, the bands gradually reload to the original 1000 pounds.
This is a very effective reactive method. One becomes aquainted with a heavy load at the start of the squat while maximizing strength at the bottom and explosively returning to completion.

Westside often uses this method for benching as well.

While the deadlift does not require an eccentric phase in contests, we do deadlifts in a similar fashion. The bar is reduced by 135 pounds at the floor by supporting it with Jump-Stretch bands attached

to the top of the power rack. After locking out the deadlift, the entire 135 pounds is lifted out of the bands. This method teaches an explosive start and to accelerate to the top.

Let's look at a slightly different method: the heavy-light

method. The first system employs bands. For benching, on speed day, after a thorough warmup, use two sets of mini-bands with your prescribed amount of barbell weight. After doing 5 sets of triples, take off a set of mini-bands and do the remaining sets. The bar will feel extremely light.

Fred Boldt's sets look like this: 205 pounds bar weight plus two sets of mini-bands, equaling 170 pounds at the top and 80 pounds at the chest. After 4 sets of 3 reps with two sets of bands are done with a bar speed of about 0.75 meters/second, Fred takes off a set of mini-bands. Now the bar speed increases to 0.8 meters/second. Fred's body reacts as if the original two sets of bands are still on the bar.
The contrast between the heavy and light load causes added stimulus to the central nervous system, producing added acceleration. This method can be used for squatting and deadlifting or even Olympic pulls.

If you don't have weight releasers or Jump-Stretch bands, the heavy-light method can be done by first using a weight of roughly 90% for 1 or 2 reps for 2 or 3 sets. Then reduce the bar weight to 40 to 60% and do 2 or 3 sets of 2 or 3 reps. This can be done on all lifts, in addition to weighted dips, weighted pull-ups, box jumps, etc. Keep reps low to conserve energy.

A note to ball players: It's great to be quick, but quickness is just one component of speed. Quickness is defined as an action of the body

that does not require muscular effort or the complex coordination

requiring energy (`!Soviet Training and Recovery Methods`!, Ben Tabachnik).

I try to identify the authors I read, but I also identify the participants we test at Westside. We test only the world's best or nearly the world's best. This authenticates my findings. Many experiments with novice lifters with poor form will yield insufficient data.

There are many types of strength and many methods to develop them. Too much of one type of training can interfere with all the rest. So plan your training carefully and you will succeed more often than not. In the United States, the emphasis is on teaching, not coaching, so the coach must learn on the job. Don't be afraid to experiment with new methods. Many of our new, so-called unproven methods are really old, proven Soviet methods, based on the coaches' experience.

Westside Barbell

614-801-2060

www.westside-barbell.com