More Pop at the Top

Bill Starr: 2005

How to Turn Dynamic Pulling Exercises into Dynamite

All serious strength athletes include at least one dynamic pulling exercise in their routines. They understand that by handling heavy weights in an explosive fashion, they build much stronger and more functional muscles. Of course, some sports require more powerful back, hip, leg and shoulder muscles than others. Those who participate in contact sports absolutely must prepare their entire bodies for stress on the playing field, and Olympic-style weightlifting is all about developing the muscles and attachments used in pulling big numbers in the snatch and clean.

If you do power cleans, power snatches, full cleans and full snatches, you have to be aggressive in the final segment of the pulling portion of the lift. The bar needs to jump at the conclusion of the pull. If it doesn't, you won't have sufficient time to rack the bar on your shoulders in the full or power clean or lock it out solidly in the full or power snatch. Those lifts all have to be pulled to a certain height with a strong finish. While height is certainly critical, so is the velocity of the bar at the very top.

Naturally, lots of other factors are involved in the execution of a heavy clean or snatch, either power or full—body positioning during the movement, timing, coordination and the ability to move under the weight quickly. Bottom line: If you don't pull the bar high enough and it doesn't leap at the top, your odds of making that lift at max weight aren't good.

When I competed in Olympic lifting on the East Coast, a team from an unnamed gym in a major city would often show up. They were all extremely strong and always did especially well in the press. They thrived on brute strength and took big leads into the snatch. Even though they were stronger than the majority of their competitors, they didn't do well in either the snatch or clean. It wasn't because of poor body mechanics, foot speed or timing. Rather, none of them had any pop at the finish. The bar would be pulled plenty high—sometimes much higher than necessary to order to make the lift—but it seemed to be moving in slow motion. So no matter how fast they tried to move under the bar, they were never fast enough. The weight would drop like an angry guillotine, leaving them crumpled into frustrated rag dolls on the platform.

In contrast, a number of lifters didn't appear to be pulling the bar high enough to succeed with their snatches or cleans, but they did because they provided such a powerful finish that they had ample time to set themselves under the bar. Bob Bednarski had such a strong final pull in the clean that the bar always crashed down on him in the bottom position. Most coaches don't want that, since the descending bar frequently rebounds out of the rack. Yet Barski developed his technique around the falling bar. He would get extremely tight in the bottom and be ready for the weight when it arrived. In my mind, it's better to overpull a weight than to underpull it.

That's why I want to concentrate on improving the top pull—not just to make it higher but also to add some pop at the top. I should mention that the exercises I'm recommending to help develop a more explosive finish are beneficial to anyone interested in improving overall strength, even if you're not interested in doing any version of cleans or snatches. They will build powerful upper-back muscles and

attachments, which are extremely useful in any athletic endeavor, competitive or recreational—indeed any physical activity, such as planting a garden, changing a tire or mowing the lawn.

A strong upper back helps stabilize the shoulder girdle and enables you to do a wide range of exercises that involve those muscle groups. Having a sturdy set of traps that climb high up the back of your neck is an invaluable asset. Many lives and spines have been saved by extra powerful upper backs, which means the exercises are beneficial even if you're not interested in Olympic lifting or planing to participate in a sports activity.

In many instances athletes aren't applying a snappy finish to their snatches or cleans simply because the muscles and corresponding attachments responsible for the action aren't yet developed to the extent that they can provide the necessary power at the end of the pull. That's the case for beginners, who are trying their best to make the bar jump at the top. It's just that their traps aren't yet ready. They will be over time, though, and the emphasis should be on pulling every single rep as high as possible.

In most cases the lack of a strong finish comes down to improper technique, such as cutting the pull way too early, As a result, muscle groups that make the bar climb higher aren't brought into play. It happens when you key to move under the bar too soon. You might believe you're pulling plenty long, but you're not. Those who train alone or don't have the benefit of a coach fall into that trap.

Which was exactly what I was doing prior to moving to York. While I really thought I was pulling to full extension on my snatches, it turned out I wasn't. Since I was the coach at the Marion YMCA, none of the other lifters picked up on my form flaw. Tommy Suggs and Barski noticed it immediately, though. After I learned to key a fraction higher than I'd been doing, my snatches started to improve. It was a mistake in technique rather than a lack of strength. The trap strength was there; I just wasn't using it.

Whenever I see an athlete cutting his pull or not getting much of a pop at the finish, I start him on high pulls. He does both snatch and clean high pulls because each version works the various back muscles a bit differently. When done correctly, high pulls enable you to feel the pulling movement with heavy weights more than full cleans or snatches. While the exercise is dynamic, you do the first and second phases relatively slowly. That lets you learn proper mechanics more easily than a faster lift does.

Proper mechanics will teach you the right line of pull, sequence and extension so that the final portion of your lift will be explosive. The bar must stay close to your body from start to finish, If it strays too far out front, you won't have the leverage to apply the necessary force at the end to make it climb higher. So the bar starts against your shins, glides up your legs, brushes your abs and ends up touching your chest.

There's a tendency to lower your chest to meet the bar once the weights get demanding. Don't do that. Instead, extend your chest upward at the finish. At the conclusion of the high pull, you should be up on your toes with your body in a vertical position and your elbows up and out—not down and back. Once your elbows turn backward, you're no longer able to provide upward thrust with your traps. All you have left is momentum, and that's not always sufficient to complete a snatch or clean. Remember, the longer you can keep your elbows up, the better—largely a matter of practice. Many get into the habit of letting their elbows turn backward way too soon, and they have to concentrate on making the change.

Sequence is critical to pulling weights really high and is perhaps the most troublesome aspect of high pulling. Keep in mind that a high pull is no more than a deadlift followed by a shrug. The transition between the two moves, however, has to be done smoothly. There can't be any hitching or hesitation. It's one long, continuous, fluid motion. The bar comes off the floor slowly, picks up speed through the middle and becomes a soaring image at the top.

The hardest part of the sequence to master is waiting until you've fully contracted your traps before bending your arms. When you bend your arms too early, your traps can't contract nearly as well, and that negatively affects the finish. Keep your elbows locked, and once the bar passes your belly button, jam your traps up forcefully, instantly bending your arms afterward. When the sequence is coordinated perfectly, the bar will jump and provide you with a strong finish. Even when you feel the bar leap upward, continue to put pressure on it. That will cause it to climb higher.

Another common mistake is to let your back round during high pulls. That takes you out of the optimum pulling position and will hurt your finish. To help maintain a flat back, lock your shoulder blades together. If you do that yet still end up rounding, use less weight. It's more productive to do your sets using correct form than to knock out some with heavy weights using sloppy technique.

Just where you set your hips prior to initiating the pull isn't that important, but it's crucial that they elevate at the same rate as the bar. When they come up faster than the bar, you move out of the proper position for a strong top pull.

From the very first rep on the high pull, pull the bar as high as you possibly can. On the first couple of warmup sets the bar may climb up over your head. Good. That's what you want. Once you get the long pulling pattern ingrained in your head, you'll be much better able to extend up after the weights get heavy.

By the way, use straps when doing high pulls. They'll let you concentrate on your technique and not worry about holding onto the bar. They'll also help you handle more weight, which translates to greater strength. Seat belts from the rear seat of old cars make long-lasting straps. Run them through the wash a half dozen times to soften them, and they'll last forever. Well, almost.

I've found that most lifters can pull a bit higher than they think they can if they have a tangible goal to shoot for. When they don't get feedback, athletes believe they're putting out 100 percent, but there's still room for improvement. I hold out a stick a few inches higher than where they pulled the last rep and tell them to keep extending until they hit the stick. It usually takes them a few attempts to figure out how they can gain those extra inches, but they always do. Tapping that stick has a Pavlovian effect. The sound of hitting the stick is an instant reward. I continue to elevate the stick as long as they keep hitting it. Quite often, they end up pulling the final reps six or eight inches higher than they did the first couple. Once they get the feel of full extension, they can use it on all of their other pulling exercises.

I usually alternate snatch and clean high pulls in the program for the sake of variety. As I mentioned, the two versions work the back somewhat differently, and by doing them both, you achieve more complete development. You can do high pulls right behind another pulling exercise, such as power snatches or power cleans, or as the primary back exercise for that day. When you do them in conjunction with another exercise, do only three sets of three, and then slowly add to those when you're able to recover from that amount of workload.

If you decide to do high pulls only, use this formula: two sets of five followed by three to four sets of three. You can either work up to one max set or select a poundage that's tough yet still enables you to maintain correct form and knock out two or three sets. How much weight to use? As a rule of thumb, 75 pounds over your best power clean for clean high pulls and the same for power snatches and snatch high pulls. You may not be able to handle that much in the beginning. That's fine. As your form improves on the high pulls, so will the numbers, Remember, technique is more important than the weight you use. When the bar starts dragging up your body and resembles a limit deadlift, lower the resistance.

While a steady diet of high pulls will improve the top pull, at some point you need to overload your upper back even more.

Enter shrugs done with a snatch and clean grip (plus straps, of course). They build greater upper-back strength because so much more weight can be handled than in the high pulls. Athletes who use 350 in the clean high pull will have no trouble shrugging 500 for reps.

I realize that some coaches teach their athletes to shrug with locked elbows, I don't. I want the shrug to duplicate the final motion of the clean and snatch where the arms play a significant role. Bending the arms at the end of a shrug strengthens a lot more muscles and attachments, and in my mind that's a good thing. Besides, the arms certainly bend at the finish of a snatch or clean, so why not in the shrug?

And since I'm seeking height, it only makes sense to utilize the arms at the finish. A strong arm contraction right behind the traps jamming upward will cause the bar to leap upward. Several of my athletes who used the straight-arm method of shrugging tried it with a violent bending of their arms at the top. At the following workout they reported that their traps and arms got sore to the touch. Soreness is the strength athlete's friend.

Until you're comfortable with the form on shrugs, stay inside a power rack. After each rep lower the bar to the pins in a controlled manner, and take a brief moment to make certain that all your body mechanics are correct: bar tucked in tight against your legs, front deltoids out in front of the bar, back locked and flat. If the holes in your power rack let you, start the shrugs at midthigh. That will let your hips elevate the bar from the pins before transferring the action to your back and arms. Set the bar too low, and the start will be awkward, causing your back to round. Set it too high, and you won't have the benefit of your hips.

Your first thought should be to push your feet down through the floor or rack platform. That will ensure that you start with a solid base. Any muscle group that relaxes the slightest bit during the lift will severely affect the height of the pull. So you need to keep your entire body so tight that you're almost cramping. Use your hips and legs to provide the initial thrust, and then bring that power into the bar up through your back, shoulders and arms. Attempt to pull every rep higher and higher. You can use the stick trick to help obtain your goal or set a pin loosely at a height you want to hit. Don't make the mistake of locking in a top pin, though, or you'll end up jarring your eyeteeth loose. Remember, every inch higher you shrug the weight, the greater the strength gains.

In order for clean or snatch shrugs to be beneficial, you must pull in the same line as you clean, snatch or high pull. If you pull back too far or glide the bar up the rack railings, you're defeating the purpose of the exercise.

After you have the form down pat, alternate shrugging inside the rack with the same move outside the rack. Those moves are more difficult. I call them Hawaiian shrugs because for two years at the University of Hawaii we didn't have a power rack. The athletes took the bar off pins from the rear of the squat rack and shrugged. Action outside the rack requires so much more control and a more precise line than when it's done inside the rack. If you let the bar crash downward, it will proceed to the floor. Pull back or forward, and you'll lose your balance and end up dumping the weight.

Since Hawaiian shrugs are so demanding, you use less weight, and I sometimes lower the reps from five to three. The dynamic action at the top is what you're after. Some only like to shrug outside the rack once a month. That's fine, just so you do it occasionally. The two forms of shrugging complement each other nicely. Five sets of five reps are what I recommend for any type of shrugging.

Lastly, you can use pure isometrics or isotonic-isometrics to strengthen the muscles and attachments used in the top pull. For the clean, set the bar midway between your belly button and breastbone. Place the higher pins as close to the lower ones as your rack permits. Strap on, climb up on your toes with your body vertical, extend your elbows up and out, elevate the bar up against the pins smoothly, lock it in and hold for a maximum contraction for eight to 12 seconds. That's the isotonic-isometric procedure. In pure isometrics the bar doesn't move at all. Both work, although I believe the isotonic-isometrics are more productive.

To improve strength in the top of the snatch, you can proceed in two ways. The first is just to copy what you do on the clean. Set the lower pins above the base of your breastbone, right at your nipples (higher if you can manage), and do an isotonic-isometric hold. One set held for eight to 12 seconds will do the job. It's very concentrated work.

The other way to strengthen the muscles involved in the top of the snatch pull is to set the bar in that same high position described, but instead of locking it up against another set of pins, hold it off the pins for an eight to 12 count. That's a static hold and as tough as or tougher than the isotonic-isometric contraction.

Very quickly you'll understand the importance of keeping your elbows up and out and extending high on your toes. Once your elbows start turning back and down, the bar will fall to the pins. The same goes for your calves. When they give out, you can't extend enough to keep the bar off the pins. It's a terrific exercise for helping you feel where your body needs to be at the apex of the snatch pull. It's also one of the few exercises that hit the rear deltoids directly. They're difficult to strengthen, and you'll become aware of them contracting while you hold the bar off the pins or lock it up against the higher pins.

Be warned: You're not going to be able to use very much weight in either of the exercises for the snatch top pull. Typically, most handle 100 pounds less than they can snatch or 50 pounds lower than what they power-snatch. In the beginning the disparity may be even wider. One of the great things about strength training is that it doesn't matter in the least how much you use when you start doing a new exercise. It's how much you progress over the ensuing weeks and months. Increase either or both of

these exercises by 15 or 20 pounds, and your newly acquired strength will convert directly to all of your snatching movements.

You can do isos or static holds several times a week. It's best not to do them on the same day you high-pull or shrug. Do them at the end of your workout. If a power rack is available, slip in a set of clean and snatch isos on your nontraining days. When it comes to pulling for the snatch or clean, the sky's the limit.