

Starting Strength

A Stronger Finish

by Bill Starr

While this article is specifically aimed at those who are doing the two Olympic lifts – snatch and clean and jerk, the information will also apply to anyone who does a dynamic pulling exercise in his or her program such as power cleans and power snatches. Dynamic lifts should be a part of every serious strength athletes' routine. Moving heavy weights in an explosive manner makes the muscles much stronger and also more functional. When muscles and the corresponding attachments are utilized in sports activities, they are not passive, but rather in motion. So training them in that fashion provides excellent carryover value on the athletic field.

All segments of the pull are important, but it's the final snap at the finish that usually makes the difference between a success and a failure on the full snatch, full clean, power snatch, and power clean. Adjustments can usually be made for the two power movements, although this doesn't hold true for the full cleans and full snatches. The bar must leap upward at the conclusion of the pull on those two lifts. When it doesn't, there isn't sufficient time to rack the bar on your frontal deltoids in the clean or lock it out overhead with arms straight in the snatch.

These two lifts have to be pulled to a certain height in order for the athlete to complete them. And while height is critical, so is the velocity of the bar at the very top of the pull. Of course, there's more to making a snatch or clean than how high the bar is pulled and the speed at the finish. A successful attempt must include the correct body positioning and mechanics during the movement, timing, coordination, foot speed, and overall quickness in getting under the bar. Yet the fact remains: if the bar is not pulled high enough, the odds of making that lift with a demanding weight are slim to none.

During my years when I competed in Olympic lifting, I traveled to meets in all parts of the country. There would always be a few lifters who entered the contests who were tremendously strong, but lacked severely in technique. At a meet in Winston-Salem, run by Jack King, two athletes from Georgia showed up. No one knew much about them. They both trained alone and rarely entered contests. They were brutally strong. This was very much to their advantage in the press, but when it came to the two quick lifts, they were suddenly at a disadvantage. Oh, they had of plenty pull and their form wasn't all that bad. There were others in the contest who had worse technique. But what they did lack was pop at the finish of both the snatch and clean. They would pull the bar plenty high, even higher than what was necessary, but it would hang in the air, seemingly moving in slow motion at the top, no matter how fast they tried to move under the bar. They possessed excellent foot speed, but they were never fast enough. The weight would beat them to the bottom, crushing them, or hurling them backwards onto their butts.

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In contrast, I saw many other lifters who didn't appear to be pulling their cleans or snatches nearly high enough, yet they made lift after lift with apparent ease. They did so because they put such a charge into the bar at the finish that it jumped upward and this allowed them time to move into a solid bottom position ahead of the descending weight. I first saw 16-year-old Jack Hill of Buffalo, NY at the 1966 Senior Nationals. He competed in the 123-lb. class and was rail thin. Yet he turned in the highest snatch, 190, and clean and jerk, 265, and tied the winner but ended up in second spot due to being heavier than his opponent, Lennel Shepherd, of Wilmington, Delaware.

On his snatches and cleans, the bar would slowly move off the platform and move even more slowly upward. It looked like a halting deadlift and on his first attempt in the snatch, I thought, "He doesn't have a chance in hell." But right at the finish, he gave a violent trap shrug and the bar shot upward, and in less time than it takes to blink Jack had the bar firmly locked out in the bottom. Amazing. I never saw him move to the bottom. That final, powerful tug made all the difference. I was duly impressed and Jack went on to become one of America's best lifters, mostly because of his ability to put a charge into the finish of his quick lifts.

A couple of years later, after he had clean and jerked 340 at a contest in York, Jack, Bob Hise, and I decided to see how much we could deadlift. All of us had lifted in the meet only a few days before, so we knew we wouldn't be hitting a super-big number. We just wanted to find out what we could do in that exercise. Bobby and I did 600 and stopped there. But what was more amazing to me was that Jack could barely handle 400 lbs. Yet he had managed a 340 clean and jerk which is ten or twenty times more difficult than a 400+ deadlift. What that told me was the top was the key to making heavy attempts in the quick lifts.

Olympic lifting is all about height. *That* everyone understands. If a bar isn't pulled high enough, there's little a lifter can do to make that attempt. However, height alone is not enough, as I already pointed out. The bar must be traveling fast at the end of the pull to allow the lifter ample time to get into a solid bottom position in the snatch and clean. Some of the best I ever saw actually overpulled their snatches and cleans. Bob Bednarski was one of those. He had such a powerful final pull that his cleans always crashed down on him. Nearly every coach I know will say that this is a form mistake and needs to be corrected. In most cases, this is true, but not in Barski's case. This was his style and it worked for him. He would give the bar a terrific shrug at the finish, explode to the bottom and wait for the bar to crash down on him. When his line of pull was perfect and his bottom position correct, he would rack the weight quite easily. What I'm saying is that it's far better to overpull a snatch or clean than it is to underpull.

The exercises I'm recommending will help you achieve a more powerful finish which, in turn, will allow you to snatch and clean heavier poundages. First on the list are high pulls, using both the wide, snatch grip and the conventional clean grip. I'm assuming that you know how to power clean and power snatch, so the line of pull is familiar to you already. High pulls are excellent exercises to learn how to get a stronger finish because you do not have to worry about racking the weight on your shoulders or locking it out overhead. You can concentrate fully on the mechanics of the pull itself and since a great deal more weight can be used on the high pulls than on the power movements or the full movements, it is a good way to overload the pulling muscles.

It needs to be understood that some athletes are unable to get a strong finish to their pulls because the muscle groups which are responsible for that part of the exercise are not yet strong enough. This is always true in beginners and females. They have not yet developed their traps to such a degree that they can provide the necessary power at the conclusion of the pull. A steady diet of high pulls

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and several of the other exercises that I am presenting will solve that problem. But the process does take time. It isn't going to happen overnight, and this is actually a good thing. The body must have time to adapt and when it's hurried, as when taking some sort of strength-enhancing drug, problems invariably occur.

Then there are those who cut their pulls way too soon, so those groups that are involved in the very top part of the pull do not get activated and therefore do not get stronger. This happens when the athlete has been taught to move under the bar too early. Coaches have him key on moving his feet as fast as he can and slamming them into the floor. As a result, he never climbs high on his toes while at the same time shrugging his traps powerfully. That combination is what provides a strong finish. These exercises will help you learn how to do just that.

The high pull is really a simple exercise – a deadlift followed by a shrug. Yet it is without a doubt one of the more difficult movements in all of strength training to master. That's because the transition between the deadlift part and the shrug part must be done smoothly. The slightest hitch will negate the benefits. Proper technique comes from repetitions. In other words, lots and lots of practice. Both snatch and clean high pulls should be done in a program, since the two work the pulling muscles in slightly different ways. I'll begin with the clean high pulls.

Grip the bar where you normally do for power cleans, full cleans, or cleans and presses. Feet should be at shoulder width, toes pointed straight ahead with your frontal deltoids a bit out in front of the bar. Flatten your back, set your hips, and look straight ahead. With the bar tucked in against your shins, you're ready to start the high pull. Now, instead of thinking about pulling the bar upward, try to push your feet down through the floor. This will help you to maintain a perfect starting position and will set the bar in motion and in the proper line, which is tight to your body from start to finish. Don't rush the start. This will cause your arms to bend and you don't want that because it will throw off your line of pull and affect the finish in a negative manner.

It's okay for the bar to come off the floor slowly. As it passes your knees it should be picking up speed. When it reaches your waist, drive your hips forward forcefully and contract your traps. Then and only then will you bend your arms. Once you have involved your traps, drive your elbows up and out, not up and back. Once your elbows turn backward, you can no longer apply pressure to the bar and have to depend entirely on momentum. As you contract your traps and bend your arms, you should also be climbing high on your toes so that your entire body is extended vertically. That combination of arms, traps, and calves provides the power to lift the bar, not only higher but with a jolt. That explosive finish is what is needed on a heavy attempt because it allows you time to move under the bar and find a firm bottom position to rack the weight on a clean.

You should be concentrating on two things: height and speed at the finish. The upward moving bar will resemble a whip when the exercise is done right. Slow at the beginning and a blur at the finish. Learn the proper form while using light to moderate weights before loading on the plates. You may not need straps in the learning stage, but once you start using demanding numbers you will, so it's a good idea to get used to them early on.

The most common mistakes made on high pulls are: bending the arms way too soon, letting your hips climb upward at a faster rate than the bar, allowing your back to round, not finishing in a vertical position, and lowering your upper body downward to meet the upcoming bar. This last one is most prevalent for beginners and must be corrected if the exercise is to have any positive effect on the top pull. In fact, all these form faults need to be cleaned up as soon as possible. Otherwise, you're going to be wasting time and energy with little or no reward for your efforts.

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Since one of your primary goals is to achieve more height on these, build this notion into every set from the beginning. Pull the bar just as high as you can. This may mean that the first couple of sets will actually climb up over your head. That's what you want. This will help you to get the long pulling pattern ingrained in your head and will enable you to pull all the way to the completion of each high pull even when the weights get very heavy.

While an athlete is getting the feel of doing high pulls, it's helpful for him to have a goal to shoot for. I have found that nearly every lifter who did high pulls and was using good form really believed that he was giving the bar 100% of his effort, I assured them they could pull even higher and set about to prove it. I would hold a stick a few inches higher than they pulled the bar on their last rep and tell them to hit the stick with the bar. At first, they couldn't figure out how to add more upward thrust to the bar to hit that damned stick. But they always found a way, usually by using their traps more or extending higher on their toes at the end. Before they were finished with a set, many had pulled the bar six inches higher than before I baited them with the stick. It had a Pavlovian effect. Tapping that stick, however lightly, was instant gratification and motivated them to pull even higher.

Once a lifter gets the feel of extending fully and punching the weight upward at the top, he's got the battle won. Now all he has to do is get stronger and that new top-end strength will be converted to power cleans and full cleans quite readily.

The form for snatch grip high pulls is exactly the same as for the clean version, except, of course, for the grip. These are very useful in that they hit the lats and wide portion of the traps quite differently than the clean high pulls. They also work the rear deltoids nicely and all those groups play key roles in elevating a bar overhead. With the snatch high pulls, it's even more critical to turn your elbows up and out, rather than up and back, than it is when doing clean high pulls, because when you snatch you have to pull a bar higher than when you are cleaning it. Same deal as with the clean high pulls, pull full-out to the max from the get-so. Which means you might power snatch the first couple of warm-up sets.

You can alternate the two versions of high pulls or stay with one for a few weeks before switching over to the other. A lot depends on whether you need to do more strength work for your snatch or clean. They can be inserted into your program right behind power or full snatches or cleans or done as a separate exercise. If done after a pulling exercise, just do three sets of three. If they are done alone, do two sets of five followed by three to five sets of three. Threes work well because they allow you to pay close attention to form and let you move up to a heavier weight than you could use for five reps. Eventually, your goal should be to handle fifty more pounds in the snatch high pull than you can full snatch. For the clean high pulls, the target should be seventy-five more pounds than your best full clean. The overloading will enhance strength and the attention to form will be most valuable as you start climbing up the ladder of strength.

Do keep in mind, however, that technique takes precedence over the amount of weight you use on high pulls. If you're using sloppy form just to say you can handle a really heavy weight, lower the resistance and concentrate on doing them perfectly. You will derive more benefit from high pulling 300 flawlessly than doing 400 using ugly form.

After learning how to high pull, shrugs come easy. Shrugs really overload those groups which are responsible for providing that final impetus to the upward moving bar. When an athlete is able to use 300 for the high pull, he will have no trouble shrugging 450 or more. Use straps on these from the very first because they must be used when the weights get demanding. These are best done inside a power rack while you're learning the movement, but once you do, they can also be done outside

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the rack. Or taken from the bottom rung of a stair case squat rack. Or pulled off blocks. Again, both snatch and clean grips are beneficial to your cause. Unless you have a power rack that is wide enough to let you assume a wide grip, you'll have to do snatch-grip shrugs outside the rack.

It's best to learn the exercise by doing clean-grip shrugs first. Set the pins in the rack so that the bar is at mid-thigh. Strap onto the bar, make sure your back is very flat and your shoulders a bit out in front of the bar. I realize that some Olympic lifting coaches teach their athletes to shrug with their elbows locked. This doesn't make any sense to me, I want the exercise to duplicate the final motion of the clean and snatch and that means bending the arms. No one does a power clean, power snatch, or full snatch and clean with their arms straight throughout the movement, so why do an overload exercise with straight arms? In addition, the act of bending the arms greatly strengthens the two prime movers of the upper arm: brachialis and brachioradialis. So while you're making your upper back stronger you get a bonus of stronger arms. Not such a bad deal, And in order to gain more height when pulling the bar upward, the arms play a significant role.

Push your feet down into the platform in the rack. This will help you to create a super-solid base. Every muscle in your body has to be extremely tight while shrugging. Any group that is relaxed will adversely affect the exercise. Drive your hips forward and ease the bar off the pins. Do not jerk it off them for this will end up causing the bar to run out of the proper line. Now bring the power from your legs and hips into your back, and up into your shoulders and arms. As with the high pulls, pull every shrug just as high as you can. Many of my lifters were able to hit the bar that runs along the top of the power rack on their first, and even their second set. Establish the pattern of pulling through from the very first rep and when the weights get heavy, you will still be using that idea.

Keep in mind that shrugs have to be done exactly. Any deviation from the correct line of pull will have a negative effect on results. The bar has to stay ridiculously close from start to finish. With the light, warm-up poundages, at the very top, resist the weight from descending and hold it there for a couple of seconds. Lower each rep in a controlled manner. If you allow it to crash back to the pins, you will end up rounding your back and this can result in a ding. Plus, you have to start from scratch when you do this. Better to lower the weight deliberately and you're instantly ready for the next rep. Once you master the technique, you can bang out your reps in quick order.

It also helps to have a target to shoot for on these, just like in the high pulls. The stick idea works, but if there isn't anyone around to hold the stick while you're shrugging, insert another set of pins at a height you which to hit with the bar. But make sure they're dangling and not locked into the holes on both sides. Otherwise, you'll end up jarring your eyeteeth when you ram the bar up against them.

For the snatch or clean-grip shrugs to be useful, you must pull in the exact same line as when you do full snatches and full cleans. If you pull the bar way back or end up gliding the bar up the rack railings, you're defeating the purpose of doing the exercise. The line of pull is even more important when you shrug outside the rack. Pull too far forward or back and you'll be forced to dump the bar. These are good for improving balance and should only be done after you have spent some time shrugging inside the rack.

Five or six sets of five works best for shrugging. Start with 135 and keep adding 45-lb. plates until you limit out. Those final couple of sets may only move four or five inches, but if the bar is jumping, you're working your traps. Your traps will inform you whether you worked them hard enough the following morning and even the day after that. My rule of thumb is: if your traps aren't sore the day after shrugging, you didn't work them hard enough. Your goal should be to shrug the bar

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with five 45s on each side for five strong reps. That's 495 and will get you some attention in any gym in the country.

Two more exercises inside the power rack. The first is for the clean. Set pins a few inches below your breastbone and two more at the nearest holes above them. Strap on using a clean grip. Extend up on your toes and elevate the bar up against the top pins and hold it against them for an 8 to 12-second count. These are tough. Not very much weight can be used but they really get the job done because they're strengthening the groups that are involved in the finish of a clean. In fact, these carry over nicely to power cleans which have to be pulled higher than full cleans. One set is sufficient if you put out 100%. You'll know if you are trying too heavy a weight. The bar will not stay up against the top pins. You'll also discover how much your calves contribute to the top pull. In many cases, they give out before the back or shoulders.

To hit the top pull for the snatch, I use this exercise, which I consider one of the most grueling in all of strength training. Set pins at a height where your breastbone connects with your collarbones. Even higher if you can manage it. You don't need a second set of pins for this exercise. Strap onto the bar using a snatch or at least a wider grip, extend high on your toes and lift the bar off the pins. Your objective is to hold the bar off those pins for 8-10 seconds. The weakest area of your body will quickly reveal itself. Plan to use a hundred pounds less than you can full snatch. That means a 300-lb. snatcher will only be able to use 200 lbs. It doesn't sound like much, I know, but once you try them you'll understand. What you're doing is balancing a heavy weight while on your tip toes and with your body fully extended. This is exactly the position you need to be in at the conclusion of the pull for a snatch.

There are several other ways to improve the top pull for the snatch and clean, but these will enable you to move those lifts up considerably once you learn the technique and are able to handle some decent numbers. The quick lifts are all about height, so make those groups in your upper back considerably stronger and those two Olympic lifts will prosper.

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