

Low Rep Rap

Bill Starr: 2005

The Need for Low Reps in a Strength Program

If your primary purpose in weight training is to maintain a certain level of strength, then you don't have to include lower reps in your routine. The higher reps—10s, 12s, 15s and 20s—will provide your muscles with enough useful work to keep them fit. That's the case for many older athletes, and it's the smart approach.

On the other hand, should your goal be to get considerably stronger, then lower reps must be a part of your routine. Here's why. While higher reps stimulate and improve strength in the muscles, they don't involve the attachments, tendons and ligaments to the same extent. The attachments are brought into play only on lower reps. Of course, I'm talking about degrees of involvement here. Higher reps work the attachments, but not nearly enough to improve strength significantly.

For anyone just getting into weight training, five reps work well. Five reps hit the attachments, although not in the extreme, and they work the muscles very directly. That makes them valuable in that they help establish a firm strength base and afford you the opportunity to learn proper technique on all the exercises in a routine. At some point, though, you need to incorporate lower reps—threes, twos and singles—into the workouts in order to force the attachments to do more. Keep in mind that the attachments are the most important bodyparts when it comes to gaining overall strength.

I know that quite a few coaches stay away from lower reps, figuring that higher reps done with lighter weights reduce the risk of injury. Only partially true. If you use faulty technique, it doesn't matter how many reps you do, you'll still sustain an injury. Conversely, when you use correct form on lower reps, you eliminate the risk factor.

When I started lifting weights, the basic rule was to do three sets of 10 on every exercise, regardless of whether we were working large muscles or small. It was the same for squats and curls. Sounds reasonable, and that practice is still very prevalent today, especially among trainers in high schools and colleges.

I've observed, however, that when a rank beginner tries to do 10 reps in an exercise that requires a great deal of form, such as the power clean or full squat, he often runs out of gas and can't reach proper form on the final reps. That's not good on a couple of accounts. He isn't working the target muscles when form breaks down, and he's asking for an injury. Five reps poses no such problem, and the lower reps let him use more weight than 10 reps. Since he's going to increase resistance only after he's been successful with a lower poundage, he's not going to overextend.

Lower reps shouldn't be a part of a beginning routine. Fives are low enough until you perfect your form and establish a solid strength base. Once that's accomplished, there's no reason you can't do lower reps. Threes and twos are best. You can insert singles later on. Switching from five sets of five to three sets of five followed by two or three sets of three isn't that much of a change, but it's a productive alteration. Let's say you can squat 315 for five. You should be able to handle this sequence: 135, 225 and 275 for five, followed by 305, 325 and 335 for three.

You accomplish several positive things. You bring the attachments into action, making them stronger than when you did five reps. Equally beneficial is that you raise the mental barrier. Once you can handle a weight for any number of reps, doing it for more reps becomes much easier. In a few weeks you'll be doing 335 for five and 355 for three.

Another positive by-product of lower reps is that they help improve form. On higher reps, such as 10s, you can use rough technique and still complete the required reps because the weight is light. When you use lower reps and heavier poundage, however, that's not the case. You have to focus on key form points, or you'll miss the lift. Mistakes in technique show up more readily with the lower reps, and in the long run, that's useful. Understanding what you're doing incorrectly is the first step in correcting it. You'll never progress past a form mistake, so the sooner you learn how to perform an exercise perfectly, the faster your gains will come and the less chance you'll get hurt doing that movement.

I mentioned the coaches who shy away from having their athletes do lower reps, and I have to say a few words about the chart some genius devised several years ago that takes a high-rep set and extrapolates that number to a single rep. Take the athlete who can bench-press 225 for 10. The version of this chart I've seen most frequently works off the idea that every rep after the first one is worth 10 pounds. That means the athlete is capable of benching 315. Anyone who's ever lifted for any length of time knows that's ludicrous. The person who has never handled more than 225 for 10 will be lucky to manage a 275 bench, and there's no possible way for him to do 315. I know that for a fact because I've seen it happen on many occasions. Two training mates get into a dispute over who's the stronger bencher and set out to prove it. Once they get above 250, their technique starts getting shaky and confidence even shakier.

Moving big weights in any exercise is as much a matter of belief in your ability to do it as it is the workload in that lift. If you've never used more than 225, you haven't even come close to strengthening your attachments to the point that they can be successful with 315. I wish the charts were true, since it's a hell of a lot easier to do 225 for 10 than it is to make 315 for a single.

Coaches like the charts because 1) they don't have to teach the athletes the finer form points on any exercise, and 2) using them results in much higher numbers, which makes the coaches look good. Almost every year I'd hear about an incoming freshman who could lift close to our gym records at Hopkins. It was music to my ears because it's always easier to work with an athlete who's already strong. Alas, it never happened. The advertised 400-pound bencher had difficulty locking out 325, and the 500-pound squatter struggled with 365. In all cases, their lifts were based on the chart.

To me, it's like saying that if an athlete can run a hundred yards in 12 seconds, then he's capable of running a six-minute mile. Silly, right? Yes, it is and so is a higher lift figured from the number of reps done with a lighter weight. If you want credit for lifting a certain weight, then do it. It will save you lots of embarrassment somewhere down the line.

So the question is, How often should you do low reps in your weekly routine? There are many ways of going about it, and the one you select depends largely on individual preference because they all get results. I had a few very advanced strength athletes who liked doing heavy triples on all of their primary exercises in the same week: bench, incline, dips, squats and every back exercise with the exception of good mornings (I'll talk about that lift a bit later on). Then they'd go back to doing fives for a couple of

weeks before hitting triples or doubles again. Every six or seven weeks they'd max out on most of their lifts. The change of pace proved to be very motivational for them, and as their triples, doubles and singles improved, so did their fives.

The majority, however, chose to do low reps on only two or three exercises in a given week, then hit some others the following week. They never did low reps on the same muscle groups two weeks in a row. For example, they might max out on the flat bench one week, inclines the next and overhead presses or dips the third week, then repeat the procedure.

On certain days, when I saw that an athlete was definitely on, I'd change his routine from fives to heavier lower reps. I believe in jumping at every opportunity to move the top end of any exercise higher.

Any day an athlete decides to do lower reps is fine with me, just so it's not on the light day. Plus, he must always do a back-off set of eight or 10 whenever he does lower reps. That assures him of improving his total workload while pushing up the intensity—the best of both worlds in strength training.

Having said all that, I need to state that I don't use lower reps on some primary exercises, such as good mornings and almost-straight-legged deadlifts. It's not so much that I think lower reps are dangerous on those two lifts as that when the weights get really, really heavy, you're forced to alter your mechanics in order to do the exercise, especially the good morning. With heavy weights you have to adjust your position when you go to the bottom or you'll lose your balance. So you shift your hips way back and make it more of a hip and total back exercise than a lower-back movement. If you didn't do that, the weight would slip over your head.

So when I want good mornings to be a pure lumbar exercise, I keep the reps at eight or 10, and if the workload needs to be increased, I add extra sets. I recommend eights or 10s on the almost-straight-legged deadlift for the same reason. I want it to be a specific lower-back exercise. With lower reps it becomes more of a total hip and back movement. Exceptions to the rule apply to powerlifters and throwers in track and field. Doing very heavy good mornings and almost straight-legged deadlifts can be extremely beneficial for them—that is, if they've built a strong enough base to handle it.

Here's a sequence that seems to be congenial to a large number of athletes. Use it on any core exercise (except good mornings and almost-straight-legged deadlifts).

Week 1: five sets of five reps with a back-off set of eight or 10

Week 2: three sets of five, then three sets of three, with a back-off set of eight or 10

Week 3: five sets of five with a back-off set of eight or 10

Week 4: three sets of five, then three sets of two with usual back-off set

Week 5: five sets of five with a back-off set

Week 6: three sets of five, then three singles with a back-off set

The small but constant changing of the set-and-rep sequence makes every workout on a specific muscle group more interesting, and that encourages more effort and progress.

I'm often asked if it's okay to do low reps on the same exercise more than once in a given week. Yes, in special situations, such as when athletes are preparing for a strength test at the end of the off-season program. If they're planning on maxing out on singles on Friday, I have them work up to a limit triple on Monday. That gives them a good indication of what they can expect to do on Friday. While I deride the charts that translate high reps to singles, it's possible to accurately predict a single from a max triple or double—in most cases at least. Some athletes can't achieve a 320 bench after doing 300 for a double, but that's usually due to poor technique.

Doing low reps twice in the same week doesn't pose a problem if I know the athlete is going to either take the week after the test completely off or come in and do a lighter routine.

A point I like to emphasize on the subject is that when you're going after a max triple, double or single, be sure to warm up thoroughly. Don't do so much work getting ready for the final set, however, that you tap into your energy reserves. Three warmup sets of five should be sufficient. In the event that you feel you need more than that, do two or three sets with your starting weight. There's no harm in using 135 for a few sets before moving up the ladder to heavier weights.

With regard to maxing out on lower reps, I have to mention the too-much-of-a-good-thing syndrome. Achieving a new P.R. in any lift is exhilarating, and it makes no difference whether you've been training for two months or 20 years. It's still a heady experience—so much so that many get caught up in maxing out every time they do a certain lift (insert bench press here) and neglect doing the necessary base work. Now, I see no problem for anyone with a background in hard training wanting to hit a max single every week, just as long as you're smart and do ample back-off sets to keep your workload in proportion to your single.

On the other hand, those just getting into weight training should max out only about every six weeks. In between they should strive to boost their tonnage on that exercise higher and higher.

Which brings me to youngsters and low reps. Is it advisable to have them attempt triples, doubles or singles? The guidelines for youngsters really aren't that different from the ones for older athletes. They need to spend as much time as necessary on mastering form and establishing a firm strength foundation. Once that's accomplished, there's no reason they can't work up to heavy weight for low reps. I do, however, caution against singles for most. Younger people receive the same strength benefits from triples and doubles. In fact, triples and doubles add to the total workload much more than singles do. I don't believe single attempts are risky if the base is solid. However, there is one lift I would not have any beginner do max singles on, whether mature athlete or younger man: the deadlift.

There's nothing wrong with including deadlifts in a beginning program. In fact, I think it's useful. Whenever someone tries to max out on that lift without having developed all the muscle groups it uses, however, he invariably breaks form—usually an excessively rounded back. Besides, when an injury occurs during a deadlift, it is typically severe because so much weight is being used. Do deadlifts, but if you want to go heavy, stay with fives and pay close attention to technique. Any breaking of form signals that you need to use less weight. For beginners, I like to alternate four sets of eight with five sets of five each week on the deadlift, with emphasis on improving technique.

I might add that faulty form on any exercise means you should avoid doing low reps until you rectify your mistakes. It's considerably easier to correct a problem doing fives than it is doing lower reps.

What about the senior citizens of the sport? I realize that people in their 60s and 70s are still lifting impressive poundage in powerlifting and other strength events. Trust me, they make up only about 0.5 percent of the population. It's rare when someone over 55 doesn't have arthritis, neuralgia or rheumatism to some degree. Those who don't can thank their genetics more than any other factor.

I don't recommend lower reps for seniors. Fives should keep the attachments strong and not be traumatic to the joints. If fives are stressful, involving lots of pain after a workout, it's time to move on to higher reps. What you are trying to accomplish is to feed blood to your rather fragile joints and cartilage without irritating them. It's great if you're not afflicted with any maladies and can do lower reps without dire consequences. Still, take a tip from heavyweight powerlifting champion Hugh Cassidy after he retired from competition. "If I want to lift 500 pounds," he said, "I'll get a forklift." I'm in total agreement.

Some exercises always need to be done in lower reps, such as front squats, push presses and jerks. Why? There are built-in difficulties with doing higher reps on those lifts. On all three exercises the bar slips a bit out of the ideal positioning on the shoulders after the initial rep, and even more after the second. That puts a huge amount of pressure on the wrists and elbows. You don't have to endure that. The lifts are hard enough without adding extreme pain. Just do doubles or triples so you can maintain a solid rack and add more sets to increase the workload.

The same holds true for any high-skill lift like full cleans or full snatches. Since technique is critical for success, low reps serve the purpose more than higher ones. Again, simply do more sets to get the desired amount of work in the session.

Could small-muscle groups be worked in lower reps? Yes, although not very often. Plus, you have to do a lot of prior work on them before attempting a heavy triple, double or single. Before the sport of powerlifting came along, many of us competed in odd-lift meets that consisted of a wide range of strength events—usually lifts that the meet organizer was good at. The curl was frequently one of the lifts. As an Olympic lifter I never did curls, but I did a great many heavy pulling movements that strengthened my biceps and the prime movers of my upper arm. That meant I ended up doing well with a heavy single. If you establish a firm base, low reps on calves can be helpful. As regards any small-muscle group, however, low reps should be done only two or three times a year. More than that is not a good idea.

Perhaps the best reason for doing low reps in a routine is that they help build stronger tendons to protect the muscles and stronger ligaments to help secure the joints. That greatly lowers the risk of injury. For any athlete engaging in a contact sport—soccer, baseball and basketball qualify—maintaining strength integrity in the joints is essential.

Science has shown that muscles built from doing heavy lifts for lower reps lose density at a much slower rate than those subjected to high-rep routines. All good stuff for anyone interested in building greater strength. So start including lower reps in your program.