

Time to Squat

Bill Starr: September 2003

Clock Your Quads With a Workout That's Second to None

Most readers of this magazine want to make continuous progress and move their top-end numbers up on a regular basis. Change is an excellent method of achieving those goals. Changing a routine, even slightly, can instill enthusiasm for your workouts. Anything that helps you look forward to your next session in the weight room is a positive thing.

Some people get along just fine doing the same routine for a long time. Jerry Hardy and I coached together at the University of Hawaii. When he returned to California, he installed a gym in his garage and asked me for a program. He wanted to train six days a week. I sent him a routine, and he followed it exactly for nearly 20 years and was more than content to do so. There's something comforting in doing the familiar exercises in the same order, sort of like spending time with an old friend.

Now, Jerry's goal was to maintain a reasonably high level of strength fitness. He also ran two miles every morning after he completed his weight training. He wasn't lifting to prepare himself for any sport, and he wasn't interested in testing himself with max attempts. So the consistent routine fit his needs.

Most of the inquiries I receive deal with the squat. The writers tell me either that they're bogged down and not making any progress or that they have lost their zest for doing squats. My reply is always the same—try something different for a time. Quite often a variation in squatting technique or a change in sets and reps or the time spent doing the exercise is just what the doctor ordered. In many instances the trainees write back to tell me they're using the suggested changes on a permanent basis because they brought the desired results.

I've found that it's also helpful, motivationwise, to change from the conventional set-and-rep sequence every so often, even if you're doing well with your current routine. Subtle changes enable you to establish a more solid foundation and help you strengthen a weaker area that may have gone unnoticed, such as the adductors.

One variation is the 20-rep squat routine. Since that program has been discussed in many articles and books, I won't spend time going over it, other than to say that it does get the job done, primarily because 20-rep squats are extremely demanding. As Iron Man founder Peary Rader aptly pointed out many decades ago, they can trigger growth in people who have difficulty adding functional bodyweight and overall strength.

A few years ago I received a request to write a chapter for a book that has yet to be published. My topic was "The Hardest Routine I Ever Did." The thought that immediately crossed my mind was timed squats. They were, without question, the most physically and mentally demanding routine I ever got involved in, and they came about as an experiment. The competitive season was over, and Tommy Suggs and I were trying to improve our aerobic base, since that was an important attribute to have during long, drawn-out lifting contests. We played racquetball, volleyball and some soccer but got the notion that we could

accomplish something on the same order in the weight room. In 1967 all the authorities on the subject said it wasn't possible. We believed differently.

We chose the squat because it was the most taxing on the cardiovascular and respiratory systems and because we could still do high reps, even if we were fatigued. At that time we were both capable of a 500-pound back squat and were handling in the mid-400s for five reps. Our form was good, which is an important consideration. I never put trainees on this grueling regimen unless they have perfect technique. The reason will soon become obvious.

The routine consisted of five sets of 10. The kicker was that on each subsequent workout we increased the weights on the five sets. We went through a trial workout, moving fast but not full-bore, and decided that we should be able to finish with 275 and do the sets in 12 minutes.

We did these at our noon session, and it was all we did at that time. Later, at four o'clock, we would do our other work. After taking ample time to make sure we were thoroughly warmed up, we started in, keeping track of how long it took us to do a set from the moment we took the bar out of the rack to the moment we rerecked it, as well as our resting time and weight on the bar. Our sets for that first session were 135, 175, 205, 255 and 275 for 10 reps each. That may not seem like much for mid-400 squatters, but we rarely did more than five reps. Ten-rep sets were very high for us. Plus, we were conservative to make sure we made it through.

We completed all our sets in 10 minutes, then collapsed to the floor. Our plan was to check our pulse rates, but we were unable to do that until about 15 seconds had passed. Both were over 180, which was all right for our age group. When we finally recovered, we concluded that we were on the right track and would continue with the timed squats. We did agree that twice a week was enough for them. Any more and they'd hurt our other training—and having to consider doing them more than twice a week was too much for us to handle, as they weren't fun. In addition, we only planned to do them for a month. After that we would have to start handling heavier poundages in preparation for the upcoming season.

At the eighth session, our last, we used 355x10 on our final set and completed all five sets in seven minutes. It was an increase of 80 pounds on the bar, but, more important, we had cut three minutes off our time. We felt that was as far as we could go, as there was only so much time we could eliminate due to the necessity of reloading the bar after the sets, coming out of the rack, doing the reps and replacing the bar. Of course, as the weights got heavier and we became increasingly fatigued, it took longer to do a set.

While I'm sure the timed squats had a positive influence on our aerobic conditioning, the unexpected plus from doing the routine was the way it affected our mental states. Prior to embarking on this program, we always took five or more minutes between our heavy sets. Timed squats taught us that we didn't need much rest. On those final two heavier sets of timed squats I was unable to feel my legs, and tiny spots would appear in front of my eyes, yet I still went up and down—as did Tommy. At the conclusion we flopped to the floor, elevated our feet on a bench and gulped in air, marveling at our insanity. Even so, we agreed that we hadn't tapped into our reservoir of strength like that before, and that understanding of what the body can withstand under dire stress gave us a tremendous boost of confidence on the lifting platform. If we got rushed between attempts, it no longer mattered. It also helped us move through our regular sessions at a much faster pace, which enabled us to do more work in less time.

I've put a number of athletes on this routine, and it's proven to be especially useful to those engaged in endurance activities, such as long-distance runners, triathletes and mountain bikers. Very few pure-strength athletes I've put on timed squats could handle them, regardless of the amount of weight on the bar. They've simply given out or tightened up. Anyone who's using any tissue-building substance cannot do them either. When Tommy and I used this program, we were off steroids. This was during the infancy of drug use in weightlifting, and we took long periods of abstinence, got liver-function tests and were checked by a physician.

One strength athlete who was able to do timed squats really blew my mind because he far surpassed anyone I'd ever trained before—or since. Werner Krueger of Columbia, Maryland, was an All-American lacrosse midfielder at Johns Hopkins and one of my favorites. Unlike many of the other lacrosse players he never shirked the hard stuff I gave him. In fact, he invited it. Just before the season started, he asked if I had anything in my repertoire to help him improve his aerobic base. What else but timed squats? He breezed through the first session and wasn't all that winded when he finished. Werner, whom I nicknamed "Possum," for no reason other than my warped mind came up with it, only weighed 170, but I started squeezing the time and loading more weight on his final sets. To my utter amazement, he used 295x10 at his last session and did all his sets in less than six minutes. I really didn't think it was possible to do five sets that quickly. In addition, he ran four miles before coming to the weight room.

It's a good idea to have someone around to do the loading and unloading. That will save you valuable time and energy. No more than two people can do timed squats at the same time. Otherwise, you'll have too much of a delay between sets. I wouldn't even think about doing these unless you're very fit and can endure pain. In short, they're not for the timid. On the other hand, if you've been doing the 20-rep program for a while and would like a change, these might fit into your schedule very nicely for a month or more.

A variation on the conventional squat that I use with a great deal of success is the pause squat. It's especially useful for people who have trouble going low or exploding out of the bottom position. There's nothing complicated about them. You simply pause at the lowest position in your squat and stay there for a three- or four-second count before recovering. Don't do the counting yourself unless you train alone because you'll always cheat. Have someone else do it and give you a clap when it's time to recover. Do pause squats with relatively light weights for high reps, say 10s and 12s, or heavier poundages for fives.

For them to be helpful, you must go below parallel and concentrate on using your power pack to drive the bar upward, rather than recoiling out of the hole. Paused squats force you to stay extremely tight, which is critical when you're attempting heavy weights, and they also help you learn to maintain the correct posture throughout the lift.

I generally incorporate them into athletes' programs in the form of one or more back-off sets of 10. One is usually enough for most people. Six-hundred-pound squatters have crumpled to the floor after handling 315x10 on pauses. As with timed squats they teach you that you can still make those final reps even though you're exhausted and all feeling has left your body. If I see lifters who are having lots of difficulty going deep, I have them do all their sets with a pause for five reps until they improve.

Wide-stance squats are great for a change and are particularly beneficial for people who display a weakness in their adductors. If your knees turn in during a heavy squat or a heavy pull off the floor, your

adductors are relatively weak and need some direct attention. Wide-stance squats involve the adductors to a large extent and are the very best way to strengthen that group if you don't have an adductor machine available.

How wide should they be? At first just move your feet out a bit to make sure that the wider stance doesn't aggravate your hips or knees. If it doesn't, gradually move them out as far as you can while still being able to go below parallel and maintain your balance.

Even if athletes don't show any signs of adductor weakness, I still include some wide-stance squats in their program. On the light squat day I have them do two warmup sets, then three sets with the same weight. For example, 135, 225 and then three sets with 275, all for five reps. They do the first set with 275 using their normal stance but move to a wide stance on the second set and a narrow stance on the third. Eventually, most are able to do the last set with their heels touching. It takes some time to master the balance. The slight variation in stance helps build a firmer base and ensures proportionate strength. It also makes the otherwise uninteresting light day more challenging and fun.

A program that many bodybuilders used to do, usually just before a big contest, was nonstop squats performed without lockout out at the top. They were screamers because your legs definitely let you know that they didn't approve of your foolishness—but they were effective at eliminating unwanted fatty tissue in your legs and helping you achieve more cuts. Most bodybuilders who used them kept the reps high—15s and 20s—and constantly pushed for higher weights. You can only do them for a short time, since they start wearing on your brain even more than your body.

Nonstop squats are excellent for someone who's getting ready for ski season. Do them for three or four weeks, and you'll be able to handle the toughest slopes. When you do them, just remember that if you stop, the set is over. The same goes for locking out. Find a number that you can perform correctly, and then build on it. These also work well as back-off sets. If you do them right, you should be spent when you finish.

Like everyone, I sometimes find myself in a situation where I have very little in the way of equipment and have to improvise. On one occasion all I had was 100 pounds of plastic weights. So I did ultra-high reps of squats, two sets of 80. They got the job done. I've also used dumbbells for very high reps, and they were most effective. True, the tendons and ligaments aren't involved to any great extent, which means that pure strength is not enhanced, but the basic lower-body conditioning is. In some cases taking a break from pounding the attachments is a smart move. One thing I like about using dumbbells for high-rep squats is that once I'm exhausted, I can drop them. That isn't an option when you have a bar on your back—at least not a good one.

You can use dumbbell squats in addition to regular squats and do them on the days when you don't go to the gym. Vary your stance and work them hard enough, and you'll find that they get your entire leg sore.

There's a truism in strength training that the best program for you is the one that brings results. At the same time change is also helpful, so if you feel as if you're ready for a break from what you've been doing, try one or more of the ideas I've presented. Somewhere down the line you'll have the opportunity to teach someone else how to do one of these variations.