

# Customize for Strength and Size

Bill Starr: 2005

## Tailor Your Program for Radical Results

Everyone is familiar with the concept of sport-specific training. It simply means that a strength program should include exercises that help the athlete perform better in his or her chosen sport. The defensive lineman has different needs from those of the quarterback in football, and they both have different requirements from those of basketball or tennis players. The idea is widely recognized and used by coaches and athletes.

There are a lot of people, however, who don't take part in any organized sports yet still want to maintain a high level of strength and fitness in order to live a fuller life. They should also design their programs to fit their needs. I call it activity-specific training. The term especially applies to older athletes, who are still quite active even though they no longer take part in any competitive sports.

While many play in local golf tournaments, walk or run in charity events or enjoy a game of volleyball at a family gathering, it's always on the recreational level. Their goals are to have fun and get some exercise. Winning isn't that important, although it is icing on the cake.

So this discussion is aimed at two separate groups: those who are engaged in competitive athletics and those who want to stay strong so that they can be as active as they like without suffering dire consequences.

Regardless of which group you belong to, there are certain rules everyone must follow when setting up a strength program. Keep in mind that when I refer to a strength program, I mean any training regimen that includes pushing the muscles and attachments of your body to a higher strength level. For collegiate athletes that might mean striving for a 500-pound squat. For weekend golfers it could be improving their freehand squat by 10 reps.

One such rule—or guideline, if you prefer—is to do at least one core exercise for each of the three major muscle groups; shoulder girdle, back, and hip and legs at every workout. That's necessary in order to maintain balanced strength. It doesn't matter if you're a top-ranked Olympic lifter or are training so you can improve your racquetball game. If one area of your body falls too far behind the others strengthwise, problems will result.

I'm well aware of the split routine, but I believe athletes are way ahead if they condition all of their muscles in one session. It only makes sense: I cannot think of any athletic activity that uses only part of the body. Even walking involves the back and upper body.

How many core exercises you include in your routine depends on a number of factors, such as, How firm is your strength base? If you've been training hard and heavy for several years, you'll be able to handle a great deal more work than someone who's just getting started. Those who are unable to do certain primary exercises, such as full squats, must exercise all the segments of their legs with specific movements; for example, leg extensions for the quads, leg curls for the hamstrings, adductor machine for the adductors and freehand movements for the abductors. It takes all four exercises to equal one primary—the squat.

In most cases doing three primary exercises per workout is enough. After you've sufficiently worked the larger groups, you must give attention to the smaller muscles, such as the biceps, triceps, deltoids and calves.

One of the most important principles that everyone should adhere to when organizing a training program is to be sure to finish all of the big-muscle movements before hitting the smaller groups. That may not seem like much, but it is. Should you, for example, do multiple sets of curls before moving on to high pulls or deadlifts, you're asking for trouble. Since your biceps, the prime movers of your arms, are involved in every pulling exercise, you're not going to be able to handle nearly as much weight on those high pulls or deads when they are tired as you could if you had done them before curling. A second important point here: Putting stress on fatigued smaller groups can lead to injuries.

An easy rule—big muscles, then smaller ones. Get the hard stuff out of the way, and then have fun with the beach work. How many auxiliary exercises you put into your routine once again depends to a great extent on your background. Experienced bodybuilders and strength athletes can do four or five small-muscle exercises and still recover, while beginners need to limit them to two per session. I'll get to sets and reps a bit later on, but with regard to numbers of exercises to do, it's best to wait until your strength base is firmly established before you add any auxiliary exercises. Put all your energy into building a firm base with the core movements, and then, after four to six weeks, start including one or two per session. Don't fall into the habit of always doing the same ones. There are plenty to choose from, and what you really want to be doing with your auxiliary work is improving weaker areas.

One of my favorite exercises for baseball players is wrist curls, done with palms up and palms down. They also help lacrosse and tennis players, but I especially like them for baseball. Strong forearms and wrists carry the power generated by the hips and legs, back, shoulders and upper arms into the bat, as well as throwing the ball. I've found that when athletes wait until they have improved on their basic lifts—bench press, power clean and squat—they make much faster progress on wrist curls than if they start doing wrist curls when they first begin training. That's because all three of those core exercises involve the forearms and wrists. By waiting, they start curling from a strong base, which enables them to make gains more rapidly.

For competitive athletes the formula for gaining strength is four to six sets of four to six reps. As most readers know, I stay with five sets of five for practical reasons. It's easier to deal with the math when you're working with a large number of athletes, but four sets of six or six sets of four will get the job done too. I trained with a very strong athlete who always did seven reps on every exercise, including all his auxiliary movements. When I asked him why seven, he told me it was because that's what worked. Eights were too many and sixes weren't enough. That, in a nutshell, is what makes a good program—finding a formula that works for you.

For auxiliary exercises, I recommend higher reps and generally adhere to the 40-rep rule. That means two sets of 20 or three sets of 15 or four sets of 12. I realize that the latter two don't add up to 40, but they're in the ballpark. The reason I keep the reps relatively high is that the smaller muscles have already been worked during the performance of the primary exercise. More important, their attachments have been fatigued. It's been established for a long time that once you tire the tendons and ligaments, you cannot improve their strength at that session. They need time to rest before they'll

respond to stimulation again. By doing the higher reps, you avoid stressing the attachments much less than if you did lower reps, and the muscles respond to the added work.

Now to those recreational athletes who often use light weights on all their exercises. You'll need very high reps in order to force the muscles to respond and to increase the workload. How many will depend on the amount of resistance used, but I think 20 reps should be the minimum for three sets. When trainees use very light weights—or no weight at all—it may be necessary to do reps in the 100 and 200 ranges. That type of routine is extremely beneficial for much older athletes and is basically what Jack LaLanne has been preaching all his life. The ultrahigh reps flush blood and nutrients to the joints without placing them under stress, a critical factor for all those who have some form of arthritis.

Competitive athletes do best by training three days a week to start. You'll need the rest days between training sessions to aid in your recuperation from the weight work. Once the base is solid, you can add another day, as long as you make it a very light day. Many trainees make bigger gains when they stay with three days a week, however, even after they've graduated to the intermediate and advanced stages. How can you tell if you need an extra day or it will be too much? By paying attention to the way you feel at the end of a week's training. If you're completely exhausted and notice more sore spots than usual, you're most likely doing too much. Or if your top-end lifts start to move downward rather than upward, that's another bad sign. It might be wise to go back to three days a week. Then, after another couple of months, you can again try adding a lighter session.

Those who are not training heavy need to do just the opposite: They should train five or six days a week, and it won't pose a problem because the workload on each day won't be all that great. So recovery won't be difficult, as long as you're eating right and getting the necessary rest. It's really the total amount of weight you move in a week that counts. Six sessions done with light-to-moderate poundages will still be considerably less than three sessions done with heavy weights. And since high-rep, lower-weight workouts aren't as stressful to the joints or attachments, recovery will be much easier.

Both groups can benefit from using the heavy, light and medium concept. In fact, it's essential that hard-training athletes use it, or they'll quickly become overtrained and all progress will cease. There should be a noticeable difference in workloads on the three days for competitive athletes; however, for recreational athletes the differences need to be only slight. Recreational athletes don't have to adhere strictly to a heavy, light and medium flow—just do a harder workout followed by a less strenuous one; then do the other harder day followed by less strenuous one, and so on. When light weights and high reps are used, there's no reason to include a light day. Well, sometimes there's a valid reason.

I correspond with a gentleman in his mid-70s who trains six days a week. He walks for 45 minutes, then works out with weights. He has two programs, which he alternates. One isn't actually tougher than the other, but he designates Sunday, Tuesday and Thursday his heavy days because it takes him 15 minutes longer to train on them than it does on the other three. The shorter workouts he calls his medium days. Normally, he doesn't bother with a light day, but occasionally he does. Like all of us, he experiments with his routine, and every so often he overdoes it and traumatizes some joint or muscle. When he's nursing a ding, he does much less than usual, and that becomes a light day. He has a special set of exercises for those days. He also uses the light day in the event he's really short on time.

But regardless of whether the weights used are quite heavy or the workload is the highest, the harder workout should be first in the week. It's just common sense. You always have more energy after a weekend or, in the case of the 75-year-old, a day of rest. By the way, he told me that the only time his old injuries bothered him was on Sunday morning and afternoon, the day following his rest day. Once he got in motion, all was fine and dandy.

Your heaviest workout belongs at the first of the week and so do any high-skill exercises in your routine. In addition, quick lifts such as power cleans, power snatches, full cleans, full snatches and jerks should get priority at every workout. That is, unless you're doing some quick lift like the power snatch as a training exercise and are not interested in pushing up the numbers. Then it doesn't matter where you place it in your schedule.

One of the keys to gaining or maintaining strength is to continually look for weaker areas and do something to improve them. That's just as true for recreational athletes as it is for highly competitive ones. Once you've identified an area that is lagging far behind, start doing the exercise or exercises for that body-part first in your routine—and do that until it improves. I'm talking about primary exercises. Additional work for a weaker bodypart doesn't have to be a primary exercise. Auxiliary movements can be useful as well. For example, you know your delts need extra work, so you start doing a variety of exercises at the end of your workouts, all with dumbbells, to strengthen them: incline presses, seated or standing presses, and lateral and front raises. A couple of sets of 20 over the course of several months will produce the desired results.

Recognize your limitations. That's often difficult to do, especially if you've been the strongest member of a gym on some lift and suddenly find that you can no longer handle much weight on it because of some physical problem—surgery, injury, etc. All older athletes have to deal with one or more areas that they've hurt over the years. In many cases the injuries occurred outside the weight room, but regardless of how you dislocated your shoulder or damaged your lower back, you still have to deal with it in your training.

You must learn how to train around old injuries and not try to bite the bullet and train through the pain. That's a deadend street, healthwise. I trained with a man in his late 40s who decided that he was going to compete in Olympic lifting. In his younger days he had done well in powerlifting, and he was determined to show everyone that he could also master the quick lifts. He was quite strong, but in order to be successful in the snatch and clean and jerk, you also have to be very flexible, and that quality he sorely lacked. He had a history of shoulder problems, which only added to his inflexibility. Despite numerous failed attempts and ugly form, he plodded on. All he got for his efforts was even more damage to his shoulders. To his credit, he did enter a contest, but he never got a white light on any of his attempts because he couldn't lock out his arms.

That was an extreme case, but I bet every reader has seen a similar example: the person who will not let go of the bench press, even when he can't sleep the night after he works it because of the pain.

Never forget that the purpose of strength training is to help you lead a healthier life. If what you're doing in the gym is causing you misery, you're on the wrong path.

One of the great things about strength training on any level is that there are so many exercises from which to choose. Can't bench? Try various angles on the incline, overhead presses or dips.

Sometimes the problem isn't the exercise but the amount of weight being used. A man wrote to me that whenever he did deadlifts, he ached all night and was unable to get around without pain the next day. He knew they hurt him yet didn't want to drop them from his routine. Looking at his program, I saw that he always went heavy, with five or three reps, usually ending up totaling around 400 pounds. I suggested that he try a different approach, three sets of 20 with a moderate weight, and see what happens.

Two months later he wrote again and said he loved his new program and was staying with 225 for three sets of 20 because his back felt stronger than it ever had and that since he switched to higher reps, he hadn't had any pain at all.

Often, slight changes in the way you perform an exercise can make a difference. Regular deadlifts hurt? Try sumo style. Conventional shrugs cause pain? Try using a wider grip. Of course, those changes don't always work, but the point is, give them a try and find out.

My message here is that when you put together a strength program, remember that you're an individual. No one else, not even your twin, is exactly the same as you. A truism, yet one that is repeatedly overlooked by young bodybuilders attempting to follow exactly the program outlined by a top physique star. Or novice powerlifters trying to do a workout recommended by a national champion.

I've used this example before in my writings, but it makes sense to repeat it here. In the late 1960s Tommy Suggs and I trained together at the York Barbell Club. We lifted in the same weight class, had similar body types and identical backgrounds in lifting, were almost the same ages and had the same jobs as editors. While we did basically similar programs aimed at improving the three Olympic lifts, the way our bodies dealt with workloads was quite different. When Tommy tried to do the same amount of work as I was doing, he became chronically overtrained and his lifts suffered. And when I lowered my workload to match his, my gains ceased.

We fully understood what was happening and made the sensible adjustments. I continued to run up my workload, and he did half of what I did. In the end our three lifts—press, snatch and clean and jerk—were only a few pounds apart, and our totals were identical. While on paper we should have had exactly the same training requirements, in reality we didn't. In fact, everyone has a different training requirement, and the trick is to find that specific exercise or exercises that are critical to success in your chosen sport or that help you to enjoy a recreational activity to the fullest.

At Johns Hopkins, I frequently talked with a chemistry professor while we dressed in the locker room. I learned that he spent nearly all of his vacation taking extended hikes. For several years he'd covered a section of the Allegheny Trail and planned on starting out in Bear Mountain, New York, that summer. One day he asked if I could give him an exercise that would strengthen his lower back. That part of his body always gave out first and prevented him from walking longer.

I laid some towels on the end of the bench in the locker room and demonstrated how to do reverse back hypers. He wanted something he could do at home without any special equipment and that fit the bill. "Start out with 20," I told him while he did some. "When that's too easy, add more. You can do these just about anywhere. I've done them on desks, kitchen tables, cabinet tops, slant boards and picnic

tables at rest stops. Do them every day, twice a day if you can, and try to do them while you're on the trail, if possible."

The following fall he showed up at the weight room the first day of the new semester and reported that the reverse hyperextensions had worked wonders. He'd walked farther than ever on the first day, and never once did he have any trouble with his lower back. That's the beauty of activity-specific training. Setting up a strength program that enables you to satisfy your competitive or recreational goals is a very rewarding effort. All it takes is some reflection and common sense, followed by constructive action.