

# Heavy, Light, Medium

Bill Starr: 2006

## **Taking the Confusion Out of the H-L-M Program**

I receive more inquiries concerning how to organize a strength program using the heavy, light and medium concept than any other topic. Although I've written on the subject previously, it seems I didn't sufficiently cover some of the finer points of the system. That's my intent now.

It's important to understand how to build a routine around this concept. Those who fail to do so might make lots of gains in the beginning, but they invariably become over trained. When that occurs, all progress comes to an abrupt halt. Or worse, the numbers on the various exercises start slipping backward. Worse yet, in an attempt to get things moving forward once again, they continue to work heavier at every session and sustain an injury that forces them to stop lifting altogether.

Incorporating the heavy, light and medium system into your program isn't a luxury; it's a necessity for long-term progress. Mark Berry is responsible for bringing that useful concept into mainstream physical culture in the mid-1930s. He explained how to use it in his book *Physical Training Simplified*. Later, such publications as *Strength & Health* and *Iron Man* dealt with the subject, so the information has been available for a long time. Yet many strength athletes, especially younger ones, aren't aware of the value of this training tool.

The system is based on the commonsense idea that a less demanding workout should always follow a strenuous one so your body gets the opportunity to recover properly. When I began lifting, I knew nothing about that notion and lifted for two years before I saw my first fitness magazine. I'm sure a lot of older athletes were in the same boat. I believed that when I went to the weight room, I needed to work to my absolute limit on every exercise. Three times a week I went as heavy as possible. Finally, out of necessity, I began to use lighter weights at least once a week and found that my lifts began to move up again.

That's how I continued to train until Sid Henry took me under his wing at the Dallas YMCA. He understood all about the heavy, light and medium system and taught me how to use it as I became more advanced. Since then, it's been an integral part of my training.

The majority of those who lift weights are aware of the concept, although they're not always sure just how heavy they should go on their light and medium days. The heavy day is rather easy to figure out. You go to the limit on all of the primary exercises. That holds true for the rank beginner and the very advanced alike. The other two days are what give athletes trouble trying to calculate the top-end numbers.

Since I want to touch all the bases in explaining this system, I'll start at the beginning and go on from there. The light and medium days go through transitions along the way.

My strength programs start out with the Big Three, and it doesn't matter what sport the athlete participates in. The bench press, back squat and power clean are my exercises of choice and have been since the mid-'60s, when Tommy Suggs and I devised the basic routine. The athletes lift three days a

week. More at this stage is not advisable. A training day is followed by a day of rest—critical in the beginning for recuperation. The same set-and-rep sequence, five times five, is used at every session.

Since Monday, Wednesday and Friday are the days on which so many people train, I tag them with the heavy, light and medium captions. On Monday the athletes work to max; Wednesday, they do less, and Friday finds them handling weights somewhere in between the weights of those two days. How much less and where in between present problems to lots of athletes.

Many coaches like to break the poundage of the various days into exact percentages, which is fine in the initial stages of training. Heavy is 100 percent, light is 70 to 80 percent, and medium 80 to 90 percent, depending on who's laying out the routine.

That works, but if you're responsible for dealing with 50 or 60 members of a team, calculating all the numbers is a huge pain in the butt. And unnecessary. I use a very simple method of determining the top-end poundage for the three workouts, instead of grappling with percentages. Say an athlete uses these weights for the back squat on his heavy day: 135, 185, 225, 255 and 275, all for five reps. On the light day he goes only up to what he handled on his third set on the heavy day—225. His progression would be 135, 175, 195, 215 and 225. The final set on his medium day will be the fourth set on the heavy day—255. He works up to that poundage in these increments: 135, 185, 215, 235 and 255.

That method greatly simplifies the process of weight selection, and the athletes can easily do the calculations themselves, so the coach can spend more of his time helping them with their form. As the last set on the heavy day moves up, so will the preceding sets, which changes the final sets on the other two days.

The reasoning behind doing only three primary exercises, rather than four, five or six, is that once the athletes perfect their form on the exercises, it's much easier for them to learn all the other strength movements. For example, after they master the technique for the power clean, they can move with ease to power snatches, full cleans, full snatches, high pulls and shrugs.

While some programs are made up of different exercises or more than three, they adhere to the same guidelines just presented and always incorporate the heavy, light and medium concept if they're going to be productive.

The break-in period enables the beginner to learn correct form on the basic exercises while steadily improving his strength. As a general rule, I have beginners stay with the program outlined for a month or six weeks, though some are ready for a more demanding routine much sooner than that. It boils down to the individual, and the observant coach can tell when it's time to move to the next level.

I've known coaches at high schools and small colleges who kept their athletes on the Big Three exclusively during the off-season conditioning program. They've told me that they're quite pleased with the results.

I've also used this simple routine for a couple of weeks on teams that were starting their off-season strength programs. I did it because there's often a tendency for athletes who've gone through the program previously to attempt to regain their former strength levels on all of the primary exercises too quickly. Since they've handled big numbers before, their minds are ready to take them on again, but their bodies need time to adapt to the new physical demands. Some need more than others. Trying to

get back to those former weights too fast can be risky, since there's always at least one muscle group that lags behind, and pushing it can result in an injury that stops all progress.

In all my years of strength coaching, I've seen only one athlete injure himself doing good mornings. I start trainees off conservatively and increase the poundage in direct relationship to their squats. When that's done, all is well. When there are 40-plus athletes training, I'm not always able to observe every one of them. One of our linebackers at Hopkins was a serious strength athlete and had achieved a high level of success the year before. At his first Wednesday back, he was determined to do a good morning very close to his former best, which was 220x8. At 185, he pulled his right lumbar, and the injury affected his entire off-season. The lesson: Whether you're a rank beginner or an advanced strength athlete starting back on a program, make haste slowly. You'll be much better off in the long run.

After the base is established and the athletes change from doing only three primary exercises and start adding others to build variety into the routine and give specific groups more attention, they can become confused over the light and medium days. Where should they put the new exercises, and how heavy should they be? The first thing to recognize is that when the strength program is elevated to a higher level, percentages get thrown out the window. The light and medium days are mostly determined by the exercises done on those days. The exercises are selected with these factors in mind: degree of difficulty, amount of weight used and total workload.

Light day first. Many equate light with easy. That's because in the beginning program the Wednesday workout was rather easy. It isn't, though, once you start expanding the routine. Every workout is tough, including the light day. The good morning is the exercise I like for the back on the light day. I consider it one of the most beneficial of exercises for any strength athletes. Without strong lumbar, heavy pulls and squats aren't possible. They always require a concentrated effort, and since the athlete has to keep them in proportion to his back squat, they eventually become a test of will as much as pure strength. My guideline is that the good morning needs to be 50 percent of what the athlete is squatting for five reps. You do good mornings in eights, which makes them, if not the most demanding exercise in the entire program, at least in the top three.

So how do good mornings fit into the light day? It has to do with the amount of weight used and the total workload in comparison with what was done for the back on the heavy day. For example, on Monday the athlete did power cleans, five sets of five, followed by three sets of high pulls, all to limit. He worked up to 215 on the power cleans and 275 for the high pulls. On Wednesday he ended up with 175x8 on the good mornings because he'd back-squatted 350x5 on Monday. That's a huge difference in both intensity and total amount of workload.

Until an athlete becomes very advanced, I include only one grueling exercise on the light day. The other two lifts aren't nearly as arduous as good mornings. As my Hopkins athletes always declared, "Once good mornings are out of the way, I've got the rest of the week whipped." I feel the same way.

For the shoulder girdle on the light day, I use overhead presses or inclines, depending on the athlete's goals. Football players want big benches, so I have them do inclines on Wednesday and bench on Monday and Friday. For the other sports teams I insert overhead presses on the light day and inclines on the medium day. Either upper-body exercise fits the light-day requirements. Even when inclines or overhead presses are pushed to the limit, as they should be, the weights used are considerably less than

the poundage on the flat bench on Monday. An athlete who can bench 350 will be hard pressed to use 275 on the incline or 200 on the overhead press.

For the legs I include either back squats done with lighter weights or front squats done full out to max. Athletes who want to try Olympic lifting or merely want more variety in their leg routine can do front squats, three sets of five, then three heavy work sets of three. Our 350-pound back squatter will have his work cut out for him to make his final set of front squats with 285, so it fits perfectly into the light-day concept.

I said to throw out percentages, and here's why. If we strictly adhere to percentages, our athlete is required to handle only 70 percent of his best back squat for five on his light day. So our 350-pound squatter will have to use only 245x5 on the light day, and even if he goes for 80 percent, he'll squat with only 280x5. That's not enough. It's okay in the formative stages, but certainly not sufficient to help the athlete get stronger as he becomes more advanced.

Instead of percentages, I have athletes use a weight on the final set that's taxing but not so extreme that it adversely affects the Friday workout. As a rule of thumb, I have them do 50 pounds less than what they handled on Monday, for five reps. That comes to 300 for our 350-pound squatter. As his strength base expands even further, I use the formula to push up his poundage while keeping the weights manageable, with two warmup sets followed by three sets at the work weight. For example, our squatter would do: 135 and 225, then jump to 300 for three sets of five. That's still a relatively light session and adds nicely to the volume for the week.

One other note on the light day. I never have lifters do back-off sets, and I keep their auxiliary exercises to only a couple for two sets of relatively higher reps, 15s to 20s.

There's one other variable to be considered when setting up the heavy, light and medium system, and that's time spent in the weight room. The light day should use the shortest time, the medium day more, and the heavy day the most. That's one reason I drop the back-off sets on Wednesday and restrict the number of auxiliary exercises.

Frequently, athletes zip through their assigned exercises as they're instructed to do, then find that they have plenty of energy left. So they start doing more auxiliary work and end up training longer than they did on their heavy day. Even though the poundages being used on the various exercises are relatively light, when all the sets, reps, and poundages used are added up, the total amount of work will be greater than on the medium day, and that defeats the purpose of the light day.

The medium day is the most troublesome to those who are trying to set up a program for themselves or a group of athletes. Keep two things in mind about the Friday workout. First, it comes at the tail end of the training week, which means the athletes are more tired, both physically and mentally, than they were on Monday and Wednesday. Second, they have two days to recuperate before their heavy day on Monday.

Knowing that, I want my athletes to train hard but not so hard that it taps into their heavy day. I do that with exercise selection. Plus, I observe the athletes, and if I determine they're fatigued, I cut back on their workloads by dropping a few sets and all auxiliary exercises.

While they may not have enough gas in the tank to go heavy on three primary exercises, they'll be able to extend themselves on one—the squat. Not only do I expect them to work heavy, but I also expect them to handle a heavier weight on their final set than they used on the previous Monday. Rather than doing five sets of five, however, they do two sets of five followed by three heavy triples, and the weight on that last set will exceed what they used for their final set on Monday by five pounds.

Doesn't that abuse the medium concept? No. While the intensity is on a par with the max five on Monday, the workload is quite a bit less. The workout is meant as a setup day for the upcoming heavy day, when they use the same weight they finished with on Friday and do five reps. That way, the squats will climb steadily upward. The majority of my athletes can make the increase for a dozen consecutive weeks. At that point I adjust their programs to further expand their workloads.

On the other two primary exercises I'm flexible. I want lifters to apply their effort on them, but I'm not that interested in how heavy they go. If they're extra weary, they may end up doing less than the week before. That's okay, as long as they exert themselves and give 100 percent

The shrug is my back exercise for Friday. Done properly, shrugs build strong traps, which help stabilize the upper spine, a major consideration of any athlete engaging in a contact sport. I want athletes to go as heavy as possible as long as they maintain good technique. If they work to limit on that particular day, they're going to get stronger.

Wait a second, you may be thinking. When I shrug 450 or 500, doesn't that conflict with the medium concept? Not really. It's a partial movement. At some stage the bar may move only a few inches, so it's not nearly as difficult as any full-range exercise. It ranks low on the demanding scale as well. High pulls, good mornings, bent-over rows, deadlifts and power cleans all require a more intense effort.

For the shoulder girdle, the athletes can choose between inclines or flat benches. If they decide on inclines, I have them max out on threes or fives. In the event they're running low on fuel, I let them pull back a bit and drop the back-off set. If the final set is tough, they're going to get stronger in the long run. Those wanting to bench twice a week will do four sets of eight on Friday. That ups their workload without overtraining their attachments, so they'll be ready for heavy weights on Monday. As they become more advanced, I add one set of doubles after the eights, and when they're able to recover from that amount of work, I throw in one more set of two.

Those who are completely spent at the end of the Friday workout are instructed to get plenty of rest and eat mass quantities of food over the weekend in order to be fresh and full of energy for the heavy session on Monday.

Should you be on a schedule where you train four days per week, follow this sequence: heavy, lightest, light and medium. Then, once you reach an advanced level of training, do heavy, light, medium, medium.

If all this only adds to your confusion about the heavy, light and medium concept, just make sure you always follow a strenuous workout with a lighter one. Finish the week with a session that sets you up for a strong heavy day, and you'll continue to make steady improvement.