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Building Behemoths: Part 1

Bill Starr offers simple strategies for anyone training for strongman competitions.

By Bill Starr

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Cheryl Boatman/CrossFit Journal

The Pig, seen at last year's CrossFit Games, challenged athletes to move an odd object similar to the implements seen at strongman competitions.

The various Iron Man events, and particularly the most popular one of all, The World's Strongest Man, came along in 1977 and became more popular with TV audiences than either Olympic lifting or powerlifting.

The idea came from Bart Frank, who was in the entertainment business and believed a great many people would enjoy seeing extremely strong behemoths perform unusual feats of strength. He was right. Viewers, most of whom never lifted anything heavier than a case of beer, embraced the shows, which drew millions of viewers through the years.

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As could be expected, the success of the World's Strongest Man brought forth knock-offs that used different lifts to determine the outcome of the contests, yet the World's Strongest Man is still considered the best of the lot.

It didn't surprise me at all that the contests were so popular. The concept was really based on what happened at the very beginning of weight training in the late 1800s. Contests of strength between such men as Eugen Sandow and Cyclops (whose real name was Franz Bienkowski) drew packed houses all across Europe. The Highland games in Scotland always included strength events, the most popular being the carrying of the Dinnie Stones, named for 19th-century strongman Donald Dinnie. Dinnie's 1860 carrying of two stones totaling 775 lb. across the Potarch Bridge is part of Scottish sporting lore, and that sort of contest is still seen as farmers walks. In the event known as Fingal's fingers, long poles have to be flipped, and it's not that different from tossing the caber. And pulling planes and trains has been around since, well, there have been planes and trains to pull.

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So, in essence, what we are seeing in the various "strongest" competitions is simply an upgrade to an older idea—nothing wrong with that. And all the strength contests that I have seen or read about always include at least one test of overhead strength. That, too, grew out of early weightlifting, which consisted of several feats of elevating heavy dumbbells or barbells overhead. These were the tools that early strongmen used to gain their extraordinary strength.

As it so happens, dumbbells and barbells are still the tools of choice for the top strongmen in the world. Bruce Wilhelm won the first two World's Strongest Man contests by using the dynamic strength he developed through doing the Olympic lifts. Wilhelm had competed in the Olympic lifts when they still tested the overhead press, so that was always a part of his training regimen.



Anne Talheim/CrossFit Journal

Versions of the original Husafell Stone are commonly used to test lifting and carrying strength.

In contrast, three-time winner Bill Kazmaier came out of powerlifting, as did George Hechter, whom I helped get started on strength training when he was a teenager. And that brings up the inevitable question: should a person getting ready to take part in a strongman contest concentrate on pure strength movements or should he spend more time on the more explosive lifts?

In my mind, the best program is a combination of both ideas because both enhance functional strength, and that's what every athlete in any sport is really looking for. The formula for a strongman athlete is really no different than it is for a football player or someone wanting to improve his tennis game: increase overall strength by 40 to 50 percent and practice the skills needed in his chosen sport, and he will perform at a much higher level.

While I think that deliberate movements such as deadlifts and back squats are most useful in the process of gaining

overall strength, I think all athletes, including strongman hopefuls, need to do a lot of exercises that are dynamic. There's no doubt that explosive movements build a different type of muscle and attachment strength. Also, there is the often-overlooked fact that when a muscle is exercised dynamically, it and the tendons and ligaments associated with that particular muscle can withstand much more stress than when they are exercised statically.

This is only common sense, because many strongman events require a huge amount of explosive power and are highly stressful to numerous parts of the body. Of course, the most dynamic of all lifts are the two Olympic movements: full snatch and full clean and jerk. While some strongman athletes are able to do these two lifts without any difficulty, not all can. Many of the male contestants are exceptionally large, and quite often they do not possess the flexibility needed to rack a heavy clean. In fact, some cannot rack a power clean. So having to take the time to gain the needed flexibility and learn the high-skill

movements is not something they care to do.

Fortunately, there are several other dynamic exercises that can be done, even with poor shoulder-girdle and hip flexibility, and when these movements are done aggressively, the results will be significant. I'm talking about power snatches, which take very little flexibility in the shoulders and elbows, snatch- and clean-grip high pulls, and shrugs done explosively. Push presses and jerks help build explosive power in the upper body, and they, too, require little in the way of shoulder flexibility.

When designing a program for strongman competitions, keep in mind strength must always be balanced between the three major muscle groups in the body: shoulder girdle, back and hips/legs. This balance should be established at the very beginning and maintained as overall strength improves. The idea that an athlete is only as strong as his weakest body part is as true for a strongman as it is for a wrestler or swimmer.



Kimberly Potter/CrossFit Journal

Many strongman lifts, such as moving kegs and Atlas stones, involve violent hip extension, which is why Bill Starr recommends using dynamic movements in training.



To train both strength and power, Starr uses a small number of main exercises in his introductory strongman program: power cleans and power snatches, jerks, and back squats.

Simple Steps to Building Strength

As most readers know, I am a staunch believer in simplicity. With this in mind, it should come as no surprise that I think any athlete who is planning on competing in a strongman event should embark on the quest by doing just three basic exercises per session: one for the upper body or shoulder girdle, one for the back and another for the hips/legs.

Once a solid strength foundation has been established, other exercises can be inserted into the routine, but at the beginning, less is better than more. This is because recovery is a key element at every level of strength training. Move too fast and come face to face with the reality of overtraining, which can set an athlete back weeks or even months. Recovery is achieved by moving ahead slowly—baby steps—and making certain an adequate amount of rest is obtained and all nutritional bases are covered every single day.

The three exercises that I give all aspiring strongmen are power cleans or power snatches, jerks and back squats. Two of these are very dynamic movements, and it goes

without saying that every strength program absolutely must include the king of lifts: the back squat.

However, if an athlete already knows how to do full snatches and full clean and jerks, I will have him continue to do those lifts, alternating them at every workout, along with back squats. These will be done three times a week. That's enough when starting out on this program. There will be time later on to add in more work. If the athlete can handle both power cleans and power snatches and doesn't want to learn the two Olympic lifts, then he can alternate these two explosive exercises at every workout.

While using ideal form on all of these lifts is certainly preferable, it doesn't have to be nearly as precise for someone training for strongman tests as it is for the athlete who plans on entering an Olympic contest. For example, he may not be able to lock out his snatches on the full or power versions. That's OK. He's still working the target muscles. Same for the full and power cleans. Adequate technique is all right, although it's always a good idea to try and improve the form on these lifts for the simple reason that when form is perfect, more weight can be used, and that converts to getting stronger faster.

Mike Warkentin/CrossFit Journal



Junk to some, these implements give strongmen the chance to test their might.

Mike Warkentin/CrossFit Journal



The farmers walk—a classic strongman movement.

Because almost all the competitors in strongman contests are very large men, many have difficulty racking the bar across their frontal deltoids when they try to perform a clean or power clean. If flexibility cannot be obtained and there is undue stress being placed on the shoulders, elbows and wrists, stop doing those exercises and switch to power snatches. What the athletes are really trying to learn on both power movements is the correct line of pull. When that is accomplished, they can do high pulls better, and high pulls are the lift that will help them gain a great deal of strength in their backs. And it's functional strength because high pulls are a dynamic movement. Plus, high pulls overload the muscles and attachments, and in order to gain strength in any muscle group, they must be overloaded.

Recovery is a key element at every level of strength training. Move too fast and come face to face with the reality of overtraining.

Do both snatch- and clean-grip high pulls. These can be alternated every other week, but because the two variations of the lift hit the muscles of the back in a slightly different manner, doing them both adds to the strength gains throughout the back. This is still a good idea even if the athlete only does power snatches. High pulls should be done right after the power cleans or power snatches. Some of the York lifters liked to do clean-grip high pulls after power snatches and snatch-grip high pulls right behind power cleans. Try both ways and decide which works your back the best. This can be determined by how sore your back muscles are the day after you attack your back with one of the power movements and high pulls.

One thing that every lifter has to understand about high pulls: they are very difficult to do perfectly. It takes a lot of reps before the movement is done smoothly without any pausing through the middle. The lift is really no more than a deadlift followed by a shrug, but learning to pull the bar through that transition phase takes time and practice, practice, practice.

Only do high pulls once a week. Work them hard and push the numbers up. Your goal is to handle at least 75 lb. more than you use for a power clean or 125 lb. more than you can power snatch. Do 3 to 5 sets of 3 reps. Keep the reps lower so you can concentrate on using correct form. If the lift starts resembling a tough deadlift and partial shrug, you're not going to get much out of it. As always, form is more important than numbers.

Shrugs are the other dynamic exercise for the back. They have to be done with heavy weights in order to create the desired effect. Again, you can use both a clean and snatch grip. Straps are necessary, as they are with high pulls. The key to attacking your traps is to pull the bar just as high as you can on every rep from the first to last set. This may mean that the first couple of warm-up sets soar above your head. Great! That's what you want because that sets the line for the following sets.

The goal I set for my athletes is to ultimately use six 45s on each end of the bar for their final set—585 for five reps. While the bar may not move very far, that form of overloading will really stimulate those traps, and strong traps are the keystones of the shoulder girdle. You can never make your traps too strong.



Mike Warkentin/CrossFit Journal

Few strongman movements don't involve the whole body, so a training program needs to hit all the major muscles.

Do dynamic shrugs once a week. Fridays are best because that will give you two full days to recover. And if you fully apply yourself, your traps will definitely be sore for the weekend. If they aren't, you're not using enough weight or pulling the bar high enough. Five sets of 5 works best.

The next primary exercise for the back is not a dynamic one. In fact, good mornings must be done in a deliberate fashion because a great deal of stress is being placed on the lower back. There are three variations of good mornings: rounded back, flat back and sitting on a bench. I don't recommend the bench good mornings for strongmen because it's the easiest form of the lift. Whether an athlete chooses to do good mornings with a flat or rounded back is determined by how each lift feels when he handles heavy weights. Most big men can get away with doing the lift with a rounded back, but some experience a great deal of discomfort. In that case, go to the flat-back version. Both are productive when worked hard and heavy, so use the form that feels the most comfortable. Not that either one of them is actually "comfortable," but you get my meaning.

I like to alter the set and rep count every other week on good mornings. One week, do 4 sets of 10. Next week, do 5 sets of 8. The change may seem insignificant, yet my athletes tell me they can feel the difference. Always do 5 or 10 lb. more on the 8s than you do on the 10s. For most of my athletes, I set a limit on how much weight is used on good mornings. This is 225 lb. x 10. I do this because I have observed that when the athletes handle more than 225, they alter the movement considerably because they have to balance the bar on their backs to keep it from falling off.

But in the case of powerlifters and strongmen, the sky is the limit. I've had several who used 405 for 8 and it helped them move some big numbers.

The final exercise for the back is the deadlift. While the heavy high pulls, shrugs and good mornings are actually enough to improve back strength to a high degree, deadlifts should be included in any strongman's program simply because he is going to be tested on that lift in competitions. But deadlifts do not have to be done every week. Once a month is enough, and the reps should be 3 to 5. Singles are not necessary. That effort can be saved for competitions. Sets of 5 and 3 will inform you where you stand on that lift, and you can then project what you're capable of for a max single. It's much easier to recover from a workout of 5s and 3s than it is from a limit-single session.



Kimberly Potter/CrossFit Journal

Lifting the Pig is somewhat similar to flipping Fingal's fingers, and both movements show why lunges are useful in strongman training.

Back squats are the only lift the strongman needs to do to gain leg strength. Do them three times a week, using the **heavy, light and medium concept**. However, should the athlete want a bit of variety in his leg program, I substitute lunges for squats on the light day. I especially like lunges because they force both legs to work equally hard. This is not always the case for squats. Lifters often get in the habit of putting more weight on their stronger leg when the going gets tough, but this is not possible with lunges. Each leg must carry its own weight, and this makes for more balanced strength.

But like every exercise in this program, lunges must be attacked. Staying in the comfortable range just doesn't feed the bulldog. I also encourage powerlifters and strongmen to alter the sets and reps in each lunge session and run the numbers way, way up. Four sets of 10, followed by 5 sets of 6, then 6 sets of 3 will help any athlete climb right up the strength ladder. I've had athletes handle 315 for 3 going very deep.

Front squats are also great for building leg strength, but not very many strongmen can rack the bar across their frontal deltoids properly enough to allow them to use a

lot of weight, so I rarely include that lift in their programs. It's really not necessary if they work the back squat hard enough.

For all my collegiate athletes, I have them fix the bar high up on their backs when they squat. This forces the glutes, hamstrings, adductors and abductors to get in the act more. But again, I make exceptions for strongmen and allow them to set the bar lower on their backs, just as powerlifters do. That method lets them squat more weight and thus get stronger. The reason why I have all other athletes squat with their torsos upright is because they all do a great deal of leaping when they participate in their chosen sports. There is no leaping in strongman events—at least none that I know of—so powerlifting-type squats are more beneficial to them.

You may be thinking there isn't a dynamic exercise for the legs in this program. Oh, but there is. It comes as part of a primary exercise for the shoulder girdle: the jerk. In push jerks, in which the athlete doesn't move his feet, and split jerks, in which he does, the legs must be contracted in an explosive manner in order to succeed with the lift.

When you drive the bar off your shoulders to jerk it, you must fully extend before you dip under it or split under it. This, like any other high-skill lift, takes time to learn. Again, practice is the ticket. On push jerks, the line has to be more precise than when you split. If the drive is shot out front, you're not going to be able to save it, so time must be spent making the start the same on every rep and learning when to dip under the still-moving weight. On the split, time must be spent practicing where the feet must land. I have my athletes make marks with chalk where they want their feet to end up, and that helps them become consistent with their foot placement.

Everyone loves to talk about core exercises. Nothing works better than holding a bar overhead and pushing up against it.

Learn how to fix the bar at the finish so it's directly over the back of your head if you extend a line vertically. As you stand up after a split or push jerk, send energy up into the bar and hold it there for a second or two. Holding a weight overhead for a few extra seconds on every rep builds strength from your neck right down to your feet. Everyone loves to talk about core exercises. Nothing works better than holding a bar overhead and pushing up against it.

Threes work best for jerks because the bar will invariably slip off the frontal deltoids just a tad on every rep, and you don't want it to get too far from the ideal starting position. If it starts to slip a lot, just do doubles and add in extra sets to increase your workload.

The other shoulder-girdle exercises strongmen should do are military-style presses, push presses and inclines. I don't include bench presses unless the athlete feels he must do them. Overhead work and inclines provide more strength in the direction most of the events force the athlete to move heavy objects: vertically.

Military presses work the groups in the shoulders and back very thoroughly, and they can be followed up with push presses to overload those muscles and attachments. Do

5 sets of 5 military presses, then move to triples for the push presses. They are very similar to push jerks, except you only drive the bar almost to full lockout, then proceed to press the final 3 or 4 inches. The combination of these two exercises will really give your upper body a strenuous workout.

Should you feel the need to include flat benches in your program, do them as an auxiliary exercise rather than a primary one. Five sets of 8, for example. The inclines, on the other hand, need to be worked diligently. The strength they generate converts very directly to any overhead movement, just like the overhead presses and push presses. Vary the sets and reps on inclines at every session you do them. Triples one workout, 5s the next and doubles or singles the third time around. Then repeat.

Addressing Specific Weaknesses

There are a few ancillary exercises that are useful to those preparing for a strongman contest, although many find these are not necessary because they're doing so many primary movements. The main reason to include them is to strengthen some weaker area.

Standing or seated dumbbell presses are great for improving strength in the deltoids. Straight-arm pullovers and triceps pushdowns on the lat machine are helpful if the triceps are lagging. There's really no reason to do any additional work for the biceps. All the heavy pulling exercises take care of that group much better than any form of curling. When heavy weights are moved, the two prime movers of the arm—brachialis and brachioradialis—are overloaded and get extremely strong. So curls do little to enhance biceps strength any further, although they will aid in shaping that group. However, most strongmen have arms the size of hams, so it is sort of a waste of time. Better to spend the time on some body part that needs it—such as the calves.

It may not seem that the calves are all that important to a strongman, yet they are—very much so. Carrying massive weights in the farmers walk, pulling a boat, elevating a stone upward to deposit it in a barrel and driving the bar upward to start a push press all require a great deal of strength in the lower legs.

Then time must be spent improving endurance and flexibility and practicing the various skills needed in the events.



Mike Wankentin/CrossFit Journal

As evident here, an athlete's calves are an important part of strongman movements.

In the next installment, I'll cover all those aspects of training and provide some ideas about how to assemble a program to include all the exercises I have mentioned in this article. In the meantime, there is something you can do to help your cause right away: if the presses are going to be done with a thicker-than-standard Olympic bar, find one that size and practice with it. If you're going to be pulling a thick rope on some event, work with one of sufficient size and roughness so your hands will get used to it. Otherwise, you might find yourself having to drop out of the competition because of blisters or severe abrasions.

In the same vein of thought, find out how much weight is being used in the farmers walk. If it's 120 lb., practice with 130- or 140-lb. dumbbells. If you're scheduled to lift the Atlas stone, find one larger and heavier and wrestle with that. Find out the dimensions and weight of the caber or Fingal's finger, and practice with something a bit heavier and larger. A dead tree limb would work.

Overloading the specific events isn't a new idea. In Athens, Greece, at the first modern Olympics in 1896, Robert Garrett, the captain of the American track team, proved that practicing with a discus heavier than the one used in competition paid nice dividends. He didn't intentionally make his discus heavier. He thought his homemade

model was exactly the same shape, size and weight of a regulation discus. But, in fact, it was considerably heavier.

As a result, he outdistanced the odds-on favorite from Greece by a whopping 7 inches.



About the Author

Bill Starr coached at the 1968 Olympics in Mexico City, the 1970 Olympic Weightlifting World Championship in Columbus, Ohio, and the 1975 World Powerlifting

Championships in Birmingham, England. He was selected as head coach of the 1969 team that competed in the Tournament of Americas in Mayaguez, Puerto Rico, where the United States won the team title, making him the first active lifter to be head coach of an international Olympic weightlifting team. Starr is the author of the books **The Strongest Shall Survive: Strength Training for Football and Defying Gravity**, which can be found at [The Aasgaard Company Bookstore](#).