

the **CrossFit**[®]

JOURNAL ARTICLES

Sandbag Training

Brian Jones



Sandbag training has been around as long as there has been manual labor. Even in our industrial age, luggage, duffels, and those huge bags of dog food, concrete, or potting soil don't get onto the shelves or into our cars by themselves; someone has to put them there. In attempts to make fewer trips from the car, we tend to carry our grocery bags into the kitchen in strange and creative ways. Finally there are times when the real-world item is actually a sandbag, as in the case of flooding or military fortification. So as unusual as it might be to see a sandbag in your gym, it is one of the most functional pieces of gear you can get. And one of the least expensive.

1 of 7

® CrossFit is a registered trademark of [CrossFit, Inc.](#)
© 2008 All rights reserved.

the **CrossFit**[®]

JOURNAL ARTICLES

Subscription info at <http://store.crossfit.com>
Feedback to feedback@crossfit.com

Sandbag Training (continued...)

This article introduces sandbag training and equipment and the fundamental lifts. In the next one in the series, we will take a look at some more exercises and combinations and some ways to integrate sandbag work into your CrossFit training.

Why sandbags?

Let's take a closer look at the training stimulus that the sandbag provides relative to the more traditional barbell. The first issue comes with how to grip it. Asked to lift a barbell, the average untrained person won't stare at it all too long before taking a relatively symmetrical grip and giving it a good heave. The lifting mechanics may be all wrong, but there is usually little problem with the grip itself. This is not so with the sandbag. Even a well-trained athlete who has never done any sandbag work will often look all around it, spread and gather it, grip and re-grip it. In addition, he or she may re-grip it mid-rep or change grips over the course of a set as the hands and arms tire. Sandbag lifting provides an entirely different, unique grip challenge and strengthening.

A second feature of sandbag training that differs from barbell work is the level of instability. Unless you've loaded the bar improperly or are working with extremely elite-level weights, the load on the bar does not shift or wobble unexpectedly. During a sandbag rep or set the load may shift substantially from one side to the other, sag in the middle, or otherwise try to escape your grasp. Such shifting forces your core and stabilizers to work overtime in an attempt to get the weight back under control. You will be forced to work considerably harder to control a given load.

There is a difference between the instability of sandbag work and the type of instability training involving tiny dumbbells and extremely unstable bases. That difference is the load. It has been shown experimentally that the threshold for strength adaptation is around 60 percent of 1RM (one-rep maximum) for trained people. The intensity is lower if the goal is muscular endurance or strength work for a detrained individual. As the instability of an exercise goes up, the allowable load will go down. (For a good example of this, see the CrossFit video "Sandbag Grace," at right.)

Many of the new fitness implements on the market provide so much instability that the loads must be dropped below the adaptation threshold. They are good for balance work only, not strength development.

Moreover, an attempt to use increased loads with them also increases the likelihood of injury. Sandbag training's instability is significant but it doesn't limit loads to below strength development thresholds. In fact, over time, the load may be increased a great deal without a substantially higher risk of injury. All you have to do is dump the bag if you get in trouble.

Buying vs. constructing

Sandbag-type items are common in daily life and can be found all around. However, for repeated gym use, you will need something especially sturdy and durable. Your first option is to buy a sandbag kit. Ironmind has a nearly indestructible sandbag that can be filled to a weight as heavy as you'll likely ever need. Several other companies have come out with different types of sandbags as well, but I have noticed that some designs actually defeat the purpose of the training by making them more stable and easier to lift. These tools are semi-useful as "soft barbells" but sort of miss the point. The same is true of using loose heavy bags or grappling dummies: you can get a good workout but will miss out on much of the grip and stability training.

Your second option is to make your own sandbags. You'll need a sturdy duffel or pack (think military surplus), some heavy-duty contractor-grade plastic trash bags, duct tape, and sand. Put the sand in a bag, remove the air, tie it off, and tape it. Put this bag into another bag, tape it, and then put this double bag into a third bag and tape it. Slide this three-layer interior bag into the duffel, clip it closed and tape it if you feel the need. I have a sandbag I made this way that I've used for three years with no leakage. However, this isn't the only way to make one, and different methods yield different products, so feel free to experiment.

It is possible to make adjustable weight bags but considering the cost it has always seemed better to me to just make several bags in 25- or 50-pound increments (the usual weight of bagged sand) and be done with it. This isn't an exact science, and I'm not sure if sandbag training is the best place for microloading. In my experience, most women will use a 25-to-50-pounder and men a 75-to-100-pounder. The actual load should depend on fitness, experience, exercises, goals, and reps.

Sandbag 'Grace'



Sandbag Training (continued...)

Foundational Lifts

From the floor

When lifting the sandbag from the floor, be sure to emphasize proper lifting mechanics just as if it were a barbell. Unless you are performing a lift that requires otherwise, set up with the bag directly in front of you as for a clean or deadlift. Grip it using the materials rather than the handles, squat down, arch your back, and bring your head up. Dig in with your heels, keep your arms straight, and lift the bag to mid thigh.



Starting position for the basic lifts from the ground



Initial lockout position for the basic lifts from the ground

Shouldering and cleaning

To shoulder the bag, continue your lift from the floor with a second pull (jump and shrug), just as in the barbell clean, and pop the bag up onto one shoulder. If you want to clean the bag to the chest, everything stays the same except the catch position. “Rack” the clean by shooting your elbows under as if it were a bar, or release the bag completely and catch it in the crooks of your elbows, in a Zercher squat position.



Shouldering

Sandbag Training (continued...)

Shouldering and cleaning (continued...)

Getting a heavier bag up, or continuing to work under fatigue, will sometimes necessitate a change of technique. Before the rules of weightlifting were set, strongmen often used a form of the clean called the continental clean. This version allowed the lifter to pause halfway by bracing the weight on his thighs (in the way Atlas stones are lifted in strongman competitions today). Since there are no competition rules for sandbag lifting, it can be useful to utilize this technique. Once you get the bag to thigh level, remain in a partial squat to create a shelf with your lap for it to rest on. Clamp the bag tightly against your legs and use this time to take a quick breath or readjust your grip.

The knee bump is another useful variation. As the bag passes thigh level bring up one knee so that you can help throw it up using your leg. The power of your leg combined with your arms propels the bag upward so that you can complete the lift. Make an attempt to work with both legs equally when training this method.



The second pull and rack position in the clean



The pause position for the continental-style clean or for shouldering



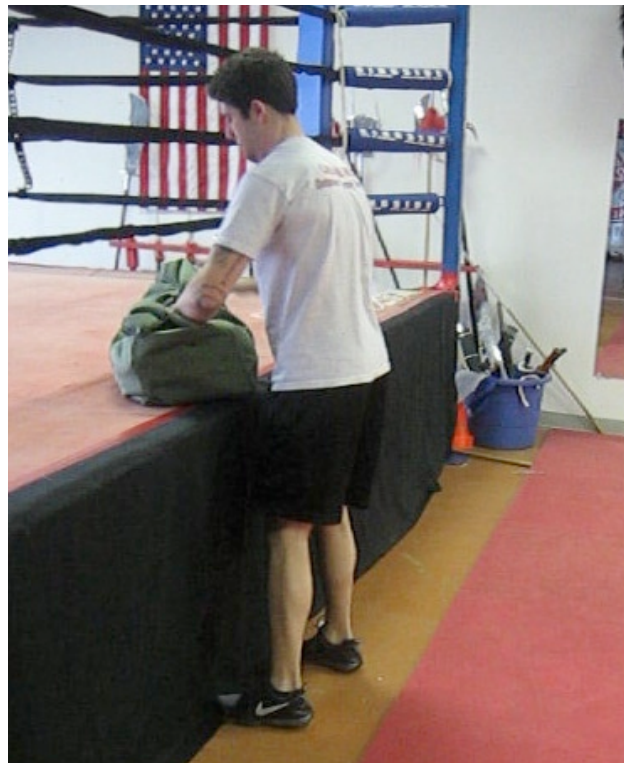
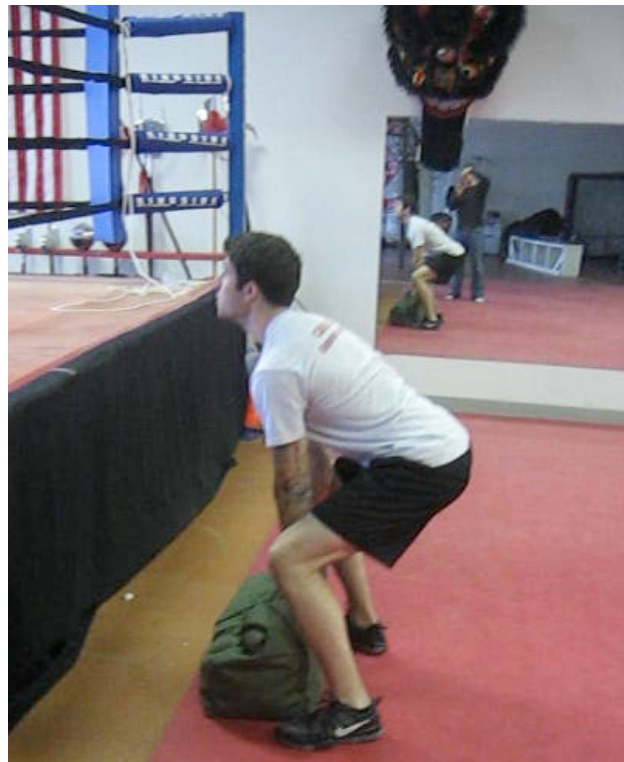
The knee assist for getting the bag to the shoulder

Sandbag Training (continued...)

Holding, carrying, or loading

Once the bag is resting on your shoulder (or held in a rack, Zercher, or bear-hug position) there are a few different training options. First, if the bag is heavy enough, simply holding it in position for a given time is an extremely demanding isometric and core exercise. For a more dynamic lower-body workout, take the bag for a walk around the room or down the block. Vary the intensity by changing the load, duration, speed, and incline. Always use caution when decelerating under a heavy load because there is an increased risk of knee hyperextension. It is often better to dump the load at the end of a weighted run than chance injuring yourself.

Finally, you can load the bag onto a higher surface such as a box, truck bed, or, as shown, a boxing ring. Once you have put the bag down, slide it back onto the floor and repeat. A loading simulation can be done without the raised surface if you have a training partner. Shoulder the bag and hand it off. Your partner takes it, drops it back down, and then picks it up and hands it back to you.



The loading exercise done on a boxing ring

Sandbag Training (continued...)

Squatting

The three main grips used for sandbag squatting are the one-shoulder grip, the Zercher grip, and the bearhug grip. Get the bag into position properly, and then execute a standard squat. As with the barbell version, your heels must be firmly planted, back arched, head up, and butt back. Break parallel with your upper thighs on each rep. One-shoulder squats place an added emphasis on core stabilization since you must maintain a strict upright body position against an unevenly loaded object. Do not let the weight force the loaded shoulder down or change the squatting motion of the loaded leg. The Zercher and bear-hug versions force you to work hard to maintain your upright back position. Do not let the load pull your chest forward or your shoulders down or to rock you onto your toes.



Shoulder squat



Bear-hug squat



Bear-hug hold



The Zercher hold/catch position

Turkish get-up

The sandbag Turkish get-up is similar to the dumbbell or barbell versions but can be a bit trickier because of the shifting weight. To complete this lift, shoulder the bag, and then lower yourself, under control, to the opposite knee. Place your hand down to brace yourself and sit down. Finally, hold the bag firmly and lie back. For this last part it helps to have a sandbag that



Sandbag Training (continued...)

will drape over your shoulder to some degree. If yours is more rigid you can simply do the lift without lying down but you will be missing out on some great core work.

Reverse the motion and return to the standing while keeping the bag firmly in place. Typically the beginning is the most difficult part of the lift and you may want to use a rocking motion to get started. Rock yourself forward and post on your arm to brace, and then stand up.



Bearhug Squat



Continental



Shoulder



Dead



Loading



Brian Jones holds a Masters degree and is a doctoral candidate in exercise physiology. He is a level-I CrossFit trainer, a strength coach, and judo and Brazilian jiu-jitsu instructor. He is a regular contributor to [MILO](#) and is the author of the classic *The Complete Sandbag Training Course* and *The Conditioning Handbook*, available from [Ironmind](#).