

## A CrossFit Startup Guide: Part 2

Learning more of the basic functional movements, plus the art of scaling

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Welcome back! Now that we have some capacity in the squat, the subject of [Startup Guide, Part 1](#), let's push forward into a few more of CrossFit's fundamental movements. There are nine total: squat, front squat, overhead squat; shoulder press, push press, push jerk; deadlift, sumo deadlift high pull, and medicine ball clean. These nine movements are foundational to CrossFit because capacity and sound mechanics in these nine form the essence of physical competence in three dimensional space. They translate readily to all other athletic movement.

### Why are we doing this?

The goal of CrossFit is fitness. Fitness, as we define it and as explained in Part 1, is increased work capacity across broad time, modal, and age domains. The goal is to get as good at as many physical endeavors as possible, over as many time durations as possible, throughout our entire lives. He or she who is best at the most skills and drills pulled from an infinite list of sports, workouts, and activities, is most fit.

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We say that CrossFit is the most effective fitness program in the history of the industry, and we have the numbers to back that up. No other program is producing athletes capable of greater work capacity in more domains at all age groups. Our prescription is constantly-varied, high-intensity, functional movements.

For any one of us to achieve the results we want, we have to work hard. We have to develop skills we did not know we were capable of. We have to be consistent. And, we have to eat well.



Indeed, this program can become a painful endeavor with seemingly insurmountable requirements of mental, physical, and emotional hardship. To avoid getting overwhelmed, go back to CrossFit's charter of mechanics, consistency, and only then intensity. You must first garner a capacity in the technique of functional movements. Next, you must be consistent in both performing the specifics of the movement and participating in CrossFit workouts. Then, and only then, do you ramp up the intensity.

So why does this have to hurt so much? Simply stated, we need intensity. As you may remember from Part 1, intensity is what gives us all the things we want from a fitness program in the shortest amount of time. Absolute intensity is simply average power; and average power is force times distance divided by time. Absolute intensity is a mathematically substantiated, empirically defined term.

Relative intensity, however, is subjective, depending purely on the individual's physical and psychological tolerances. Relative intensity means you have to work as hard as you can without overdoing it.

Both absolute and relative intensity, though very different by definition, must be pursued in the same manner: with steady progress. Intensity is best built up gradually over time. We need intensity to garner the unprecedented benefits of CrossFit, but we also need to begin at a very moderate level and steadily build upon that foundation.

### Enough Philosophy. Let's Continue Moving with the Front Squat

The next step in the progression of squats after the air squat is the front squat. The overhead squat is the king of squats, but it requires a solid understanding of, and capacity in, both the air squat and front squat. It is one of the benchmarks from Part 1 because of its unique difficulty and unparalleled physical benefit. We will cover the overhead squat in Part 3.



Watch: Front Squats, the main page video example of the movement. [[wmv](#)]

And: Front Squat Good/Bad Bi-panel, for an excellent visual depiction of good and bad form on several different athletes. [[wmv](#)][[mov](#)]

As you can readily see, the front squat is exactly like the air squat in set-up, performance steps, and execution, save the fact that we have now added a weight to the front of your body. Fight hard for a solid front rack position (holding the bar with a fingertip grip just outside of shoulders, elbows parallel to each other and up, weight supported on your shoulders) and from there execute a squat, all the while keeping the weight supported on your shoulders in the rack position (not your hands and wrists!) and pushing your elbows up through the full range of motion.



The front squat is applicable for both effectively squatting with a weight at our chest as well as leading us toward the capacity to catch weight in a clean, a more complex fundamental movement that will be addressed in a future article.

Again, work hard for your front-rack position, and understand it takes time to garner the flexibility and kinesthetic awareness to keep the weight on the front of the body while maintaining proper squat mechanics.

### Next, Going Overhead: Shoulder Press and Push Press

Watch:

- 1) <http://journal.crossfit.com/2008/11/the-overhead-series---part-1-the-press.tpl> and <http://journal.crossfit.com/2008/11/the-overhead-series--->

[part-2-the-push-press.tpl](#) by Adrian Bozman, Nov 13, 2008; a fantastic clip of top HQ instructor Adrian Bozman going through the primary points of performance in the push press with fellow HQ instructor and elite athlete Chris Spealler.

- 2) Shoulder Press/Push Press/Push Jerk tri-panel from the main page, for a single example of all three overhead lifts contrasted. [[wmv](#)]
- 3) Shoulder Press-Push Press-Push Jerk from the main page for why we will learn more than just the shoulder press. [[wmv](#)]

How does your push press look? This is the most important of all pressing movements; we must garner a capacity here before moving on. Practice the movement with PVC pipe and light dumbbells, for if you cannot approach excellent technique with negligible weight you will never be able to safely, efficiently, or effectively push a weighted bar. Fight hard to keep your body locked in position and jump the weight overhead. It's essential that you practice keeping the torso straight up and down so that the bar or dumbbells are driven straight up. Dipping forward is a very common flaw, and it will greatly limit your performance because the weight will be driven too far out in front to control effectively.

The push jerk is the granddaddy of overhead movements. In it, there is a powerful jump and land. It cannot be done slowly, and it both demands and develops high levels of coordination, accuracy, agility, and balance. It will be covered in Part 3.



## Finally, Picking Weight Up Off the Ground: The Deadlift

Like all of our other functional movements, the deadlift is a natural (not contrived or manmade) and an essential (to life, living, and the quality of life) part of everyone's existence; we all pick things up off the ground. This, however, does not mean that we do it properly. Learning the deadlift takes time, energy, effort, and study to perform correctly.



That being said, please remain patient with building capacity in the deadlift. Working with significant loads before you can complete innumerable reps with excellent alignment and mechanics is simply an unnecessary risk. Capacity comes quickly with good practice. Even if you start with 10lbs and were to add 10 more pounds each week you would be at 520 pounds at the end of a year. Of course, that linear progression is unrealistic for most athletes. The point is that regular baby steps quickly become significant.



The deadlift is a back exercise. Your musculature needs to fight hard to keep the spine aligned and rigid through a full range of motion. In the beginning, just maintaining proper mechanics even with PVC can be a challenge. Managing heavier loads requires immense kinesthetic awareness and lots of practice.

It is imperative you garner solid technique in the primary points of performance for the deadlift using minimal load (PVC pipe) long before attempting any weight. There are concerns in popular culture that the deadlift is not safe. The reality is that it is unsafe not to do them. For your back to be healthy, it must be strong enough to lift reasonably heavy objects off the floor.

Watch:

- 1) Deadlift examples with Greg Glassman giving an introduction to its importance [\[wmv\]](#)[\[mov\]](#), and a discussion to where the bar placement should be [\[mov\]](#)[\[wmv\]](#)
- 2) *Deadlift Alignment* by Mark Rippetoe Part 1 and Part 2 for proper set up of the deadlift. Part 1 [\[wmv\]](#)[\[mov\]](#); Part 2 [\[wmv\]](#)[\[mov\]](#). And for anatomy of the start up position from the same lecture [\[wmv\]](#)[\[mov\]](#).
- 3) *Double Bodyweight Deadlifts*, Dutch and Boz from the main page, showing two top CrossFit athletes lifting some serious weight. [\[wmv\]](#)[\[mov\]](#)

Read:

- 1) <http://journal.crossfit.com/2003/08/the-deadlift-by-greg-glassman.tpl> by Greg Glassman, Aug 1, 2003; what better place to start than with the founder of CrossFit breaking down an elemental lift?

What does your deadlift look like? Remember the primary points of performance of the deadlift, in order of importance: 1) lumbar curve maintained; 2) weight on heels; 3) shoulders slightly in front of bar in the setup; 4) bar stays in contact with the legs throughout the movement; 5) hips and shoulders rise at the same rate until over the knees with the bar; 6) at the top the hip is completely open, chest is up, and knees are straight. Again, practice with PVC, if done correctly and fighting for perfect technique there is nothing easy about having an un-weighted bar for the lift.



The deadlift is called one of the “slow lifts” because speed is not a critical component of a successful lift. You can lift the object as quickly or as slowly as you want; as long as you get the load to your hips, it is considered a successful lift.

This is not true for the sumo deadlift highpull, the clean, and the snatch. These movements start with the barbell (or other object) on the ground and bring it higher (to the shoulders or directly overhead). These lifts require that you accelerate the object faster than gravity. This is more dynamic than the deadlift, but they all begin with the same basic principles. Midline stabilization and keeping the combined center of gravity over the base of support (the feet) are essential. Competency in the deadlift at light-to-moderate loads is an absolute prerequisite for all of the more dynamic lifts.

### Now What?

Go back to the list on page six of Part 1. Are you ready to start scaling workouts? If those skills are still out of reach, you should practice squatting, front squatting, push pressing, and deadlifting. As previously discussed, start with and continue to use a PVC pipe, working up to minimal loads, all the while keeping the repetitions high. Only after you are consistently able to maintain solid mechanics with minimal load should you experiment with adding weight (in small increments). As long as your mechanics do not deteriorate you are safe to progress.

Now, how is your fuel intake coming? Are you working to balance your macronutrient intake? Never lose sight of the fact that you will not reach your potential without minding what you eat. You may be in the gym for about an hour a day, but what you do the other 23 has a lot to do with your capacity for fitness. Start giving those hours more focused attention.



### How to Scale, Part 1

At some point, you will have developed enough basic competency in a variety of functional movements to graduate to working off the main site WODs. We have discussed mechanics, consistency, and intensity in both Parts 1 and 2. The same approach should be followed for the workouts.

As stated in Part 1 of the Guide, these workouts are designed by Coach Greg Glassman to exceed the capacities of Olympic-level athletes. They are made to be very, very difficult. This is because almost all

of them have a time component. The quicker you do the workout, the harder it is. In fact, any differences in the time of completion for the same workout are quantifiable measures of fitness.

You should always measure the time of your workouts, but for now you should not worry too much about minimizing your time. In the beginning, just completing the workouts will be accomplishment enough. Over time, though, you will use those times as benchmarks that you will want to beat.



Scaling workouts is not an automatic process. It requires you to pay attention and think about the various goals of the workout. CrossFit's general prescription is to perform a wide variety of functional movements at (relatively) high intensity. We do a wide variety of different kinds of workouts in order to fulfill that prescription. Matching the flavor and intent of a workout is the key to scaling.

The first and easiest method of scaling main-site WODs is to reduce the load and the repetitions. For example, if the workout calls for 50 push presses at 75 pounds, you could scale that to 30 push presses at 30 pounds. The second method of scaling is to substitute easier variations of an exercise within the workout. For example, if the workout calls for handstand pushups, you could do regular pushups or you could do strict presses with dumbbells or a barbell.

Do not be too worried about getting the perfect modification of a workout. The "constantly varied" aspect of CrossFit applies to scaling also. In the above example, if you subbed regular pushups for the handstand pushups in one workout, you should probably substitute dumbbell presses the next time it comes up.

Also, a very important fact that must be remembered, scaling does not mean that the workouts become easy. Far from it. In fact, the scaled workout should be as hard as you can reasonably tolerate.

Let's get specific. Say the prescribed workout is CrossFit's benchmark workout, Diane. We'll look at the different components and break it down using the two separate scaling methods.

Diane as prescribed is written as:  
Three rounds, of 21-15-9 reps, for time of:  
Deadlifts, 225 pounds  
Handstand pushups.

The first method is to scale the load and the repetitions. This would be appropriate if you could safely perform a number of handstand pushups. One example (there are infinite possibilities) would be to perform 15-12-6 rep rounds of 95-pound deadlifts and handstand pushups, completed for time.

The second method is to scale the movement. In this case, only the handstand pushup would be substituted for because the deadlift is one of those core movements that anyone doing these workouts should be able to perform with at least light weights. Any scaling here



would be in load. For the handstand pushup, any of the above recommendations would apply. So, one scaling option (of virtually infinite possibilities), would be to keep the 21-15-9 rep scheme, but do them of deadlifts at whatever weight is appropriate for you and strict standing dumbbell presses with 20lb dumbbells (obviously, the weight of the DB can be adjusted according to your capacity). The shoulder press mimics the same movement as a handstand pushup, but is much lighter and does not require the balance and inverted coordination a handstand does.

Again, these are two examples of infinite possibilities for scaling one CrossFit benchmark workout. You can use one or the other, or both combined, to scale the workout to fit your physical and psychological tolerances. A final word of advice on scaling: in the beginning, scale more than you think you have to. You will complete the workout faster and with better technique, thus giving you more benefit with a reduced chance for needless injury, either to the ego or the body. Preserve the stimulus, scale the load and intensity, and you will be on the perfect track to elite fitness.

#### Additional Video:

- 1) A fantastic clip of Mark Rippetoe speaking about breathing for a heavy lift. [[wmv](#)][[mov](#)]

#### Additional Reading:

- 1) <http://journal.crossfit.com/2005/09/the-lifting-shoulder-by-greg-g.tpl> by Greg Glassman, Sept 1, 2005; an easy-to-follow article describing where the shoulder should be and what its role is in several different movements.
- 2) <http://journal.crossfit.com/2008/11/overhead-is-rising.tpl> by Bill Starr, Nov 7, 2008; a comprehensive article describing some reasons of the decline and vilification of overhead lifting, as well as information on and how to improve going overhead with weight.
- 3) <http://journal.crossfit.com/2008/03/on-the-safety-and-efficacy-of.tpl> by Mark Rippetoe, Lon Kilgore, and Kelly Starrett, March 1, 2008; a masterfully written article on the safety, efficiency, and efficacy of overhead lifts.
- 4) <http://journal.crossfit.com/2007/01/dumbbell-vertical-press-by-mik.tpl> by Mike Rutherford, Jan 1,

2007; an article by CrossFit's leading dumbbell trainer showing the importance of and performance steps for going overhead with something other than a barbell.

- 5) <http://journal.crossfit.com/2006/11/a-new-rather-long-analysis-of.tpl> by Mark Rippetoe, Nov, 2006; a consummate deadlift article by one of the best in the business.
- 6) <http://journal.crossfit.com/2006/07/slow-lifts-5-the-deadlift-by-m.tpl> by Mark Rippetoe, July 1, 2006; another excellent deadlift article breaking down the deadlift.
- 7) <http://journal.crossfit.com/2007/03/popular-biomechanics-by-mark-r.tpl> by Mark Rippetoe, March 1, 2007; an excellent article taking the complicated biomechanics and the set-up of lifts and simplifying them.
- 8) <http://journal.crossfit.com/2007/03/suitcase-deadlift-dumbbell-sty.tpl> by Michael Rutherford, March 1, 2007; an article on how to pick up things besides a barbell in the deadlift.
- 9) <http://journal.crossfit.com/2006/12/the-yin-and-yang-of-the-back-b.tpl> by Michael Rutherford, Dec 1, 2006; another excellent article on deadlifts with dumbbells.
- 10) <http://journal.crossfit.com/2007/11/spine-mechanics-for-lifters-by.tpl> by Tony Leland, Nov 1, 2007; an article discussing the anatomy and kinematics behind the regularly used cue of keeping a lumbar curve.



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