

A CrossFit Start-Up Guide: Part 3

Learn the most challenging of CrossFit's nine foundational movements, add in a few more skills and prepare to tackle a WOD. Scale appropriately without sacrificing intensity, and you're on the road to success in CrossFit.

Todd Widman



Staff/CrossFit Journal

Welcome to Part 3 of the *Startup Guide*, last in this series designed to help propel you on your way to elite fitness. In this final part you'll find information on the rest of the nine foundational movements, as well as *CrossFit Journal* links to more instructional material. We'll also cover the auxiliary movements mentioned in Part 1 and Part 2.

It has been and remains my goal to pass on, within three relatively short articles, enough ammunition to arm you for CrossFit's main-site WODs and lifelong fitness earned in your garage.

1 of 11

Where Are You?

Ultimately, your fitness is your responsibility. You need to constantly pay attention to your strengths and weaknesses. Everyone has plenty to work on. Beginners in particular need to be realistic about what warrants the most attention and must respect the often-difficult process of improving lifelong movement patterns.

Everyone's progress will be different. These articles can't provide a simple step-by-step approach to CrossFit because it does not exist. CrossFit, like life, isn't linear. Combining education with continued effort and dedication to moving better is the only solution.

With that, let's finish what we started.



Staff/CrossFit Journal

The correct bar position for the overhead squat is with the bar directly over the middle of your foot. Holding it too far forward or back will usually result in a missed lift.

The Overhead Squat

Squats are and will remain the cornerstone of functional fitness, and the King of Squats is the overhead version. Unparalleled in the recruitment of musculature to hold weight at arm's distance overhead throughout the full range of motion, this squat is also the gateway to one of the two Olympic lifts—the snatch. Practicing the overhead squat with PVC proves to be taxing even for the best athletes, so make unloaded overhead squats part of every warm-up.

*Squats are and will remain the
cornerstone of functional fitness,
and the King of Squats is the
overhead version.*

READ:

[The Overhead Squat](#)

Greg Glassman (Aug. 1, 2005)

The CEO and founder of CrossFit Inc. covers all aspects of the overhead squat in a simple, well-written article.

WATCH:

1. **Overhead Squatting Safely**

This short clip shows two different elite CrossFit athletes demonstrating the basics of how to properly squat and bail with weight overhead.

[\[wmv\]](#)[\[mov\]](#)

2. **Overhead Squats (Mark Rosen)**

Here is an example of a man in his mid-40s who struggled with PVC overhead squats when he first came to CrossFit about a year before this video was filmed.

[\[wmv\]](#)[\[mov\]](#)

3. **Nicole Carroll Body-Weight OHS x 15**

An example of an elite athlete fighting to perform 15 overhead squats at her body weight. This is an immensely difficult task for anyone, and it's one of the benchmark goals for elite athletes.

[\[wmv\]](#)[\[mov\]](#)

First things first, we have to establish the proper grip for the overhead squat. There are several approaches. An ideal width exists, but that presupposes full functional flexibility and no chronic injuries. Most untrained adults over 30 don't have the functional flexibility in the hips and shoulders to maintain ideal grip width throughout the full overhead squat.

READ:

Learning the Olympic Lifts: The Grip

Mike Burgener (Dec. 1, 2006)

Though he's talking about the snatch, the methods for finding the snatch grip and overhead-squat grip are identical.

Another method we frequently use to help folks find a realistic grip width is the pass-through. This is a process that begins by putting your hands very wide on the PVC. Without bending the elbows, pass the bar over your head with active shoulders (think shoulders in your ears) until you touch your low back with the bar. Then bring it back overhead to the front of your body, again without bending your arms. If you have to bend your arms to get the bar around, your grip is too narrow.

You should be able to complete a full arc, front to back and back to front, without discomfort or impingement. Now, move each hand in about a quarter of an inch and attempt another full rep. Again, there should be no real discomfort. Repeat this process until you reach the point at which you could probably keep going but the rotation is sticky. Stop here. Move your hands back out a quarter of an inch and use this as your grip for the overhead squat.

For more on shoulder health, especially if your sticking point is very wide, read [CrossFit Shoulder Therapy](#) by Tyler Hass (Oct. 1, 2005).

With your grip now established, stand tall and hold the bar overhead. Your arms should be perfectly straight with your shoulders pressed hard into your ears. This is not a comfortable position, but it is absolutely essential for success. Any bend in the arms or relaxation of the shoulders will greatly limit your performance.

Next, to define the overhead position, we want the bar to travel only vertically, remaining over the mid-foot throughout the full range of the squat. We say "overhead," but depending on your movement quality, the head may actually move forward in front of the bar at the bottom. The bar should go straight up and down, but your torso may incline.

The same squat mechanics for the air squat and front squat apply to the overhead squat. Start with the same stance (foot position). Initiate the movement with the pelvis turning over and the hips moving backward (the hips begin to close before the knees). Fight hard at turning over the pelvis and pulling yourself back and down into the bottom of the squat, staying on the heels and driving your knees out so they track over your toes. Resist the tendency to drift forward. The overhead squat is difficult, even with PVC, and many people need a little practice to be able to keep their balance throughout the entire movement.

Capability in the overhead squat carries over into all other athletic movement and makes the air squat, front squat and back squat easy in comparison.

Finally, ensure you stand all the way up at the top, bringing the hips fully under your shoulders. A common fault in the overhead squat is keeping your hips slightly cocked; that is, with your torso and your femur at an angle of less than 180 degrees at the top of the lift.

Technique and range of motion are two different things. Always fight for perfect technique in every exercise, understanding that 80 percent is pretty close to ideal when you introduce high levels of intensity. Range of motion, barring physical inability, is 100 percent non-negotiable. If you do not stand all the way up or, if capable, do not go all the way down to bring the crease of the hip below the knee, it does not count as a repetition.

It takes a lot of practice to improve capacity in the overhead squat, but it is well worth the effort. Capability in this lift carries over into all other athletic movement and makes the air squat, front squat and back squat easy in comparison.

The Push Jerk

The push jerk is the grand finale of the pressing series. It's an incredibly athletic movement that both highlights and fixes many problems. It's a jump and land in which you drive the bar from the shoulders to overhead. The lift is like the push press, but it's even faster, and you land in a partial squat before standing all the way up.

WATCH:

1. **The Overhead Series, Part 3: The Push Jerk**
Adrian Bozman (Nov. 13, 2008)
This is a fantastic clip of top HQ instructor Adrian (Boz) Bozman going through the primary points of performance in the push jerk with fellow HQ instructor and elite athlete Chris Spealler.
2. **Better Movements: The Jerk and Kipping Pull-Up**
Greg Glassman (Oct. 1, 2007)
This is an interesting and thought-provoking clip of Coach talking through the physics behind the push jerk and kipping pull-ups, and how it all relates to CrossFit's definition of fitness: work capacity.
3. **The Push Jerk**
A short clip showing Sage Burgener conducting several push jerks, with her father, Coach Mike Burgener, explaining the movement's basic points, also including his reasoning for starting athletes out with a behind-the-neck push jerk.
[\[wmv\]](#)[\[mov\]](#)
4. **Elements of the Push Jerk**
Coach Glassman talks through the key points of the push jerk with several different clips of athletes performing both good and bad examples of the lift.
[\[wmv\]](#)[\[mov\]](#)

This is a beautiful lift requiring a symphony of movement radiating from core to extremity. Athletes can put enormous loads overhead with a properly performed jerk. Infinitely nuanced—dipping, driving, re-dipping and squatting—the jerk is easy to over-think. This is a mistake, though. You can't think your way to a good push jerk (or through any of the fast lifts).

CrossFit has established a very simple method of teaching the lift efficiently and effectively:

1. Jump and land with bent knees and arms remaining at your sides.
2. Jump and land with bent knees and hands up at your shoulders.
3. Jump and land with bent knees, with arms starting at your shoulders and shooting up above your head, locking them out with a straight elbow and an active shoulder before you land.
4. Jump and land with bent knees, this time using a PVC pipe that starts in the rack position (exactly like the press and shoulder press) and is locked out overhead before you land.

Ensure numbers three and four are finished by standing up with your hands overhead. All presses end in the same position: standing up with active shoulders, locked-out elbows and the weight over the heel of the foot.

WATCH:

[Jolie Correcting the Push Jerk](#)

This is an example of small-group training in the push jerk at a CrossFit Level 1 Certification Seminar.



The push jerk is a core-to-extremity movement that's best learned with a PVC pipe and a good coach present.

The Sumo Deadlift High Pull

Now for an interesting movement that's an excellent gateway to the clean.

In the sumo deadlift high pull, the bar starts at mid-shin (or resting on the ground if you have plates on the bar) and moves quickly up to about the level of the clavicle. It's a gateway movement because it is simpler than the clean but requires both power and speed to be successful.

WATCH:

1. **Sumo Dead Lift High Pull**

This is a great theoretical introduction to the movement with several demos.

[\[wmv\]](#)[\[mov\]](#)

2. **Correcting the Sumo Deadlift High Pull**

Rachel Medina (April 23, 2009)

It is a perfect clip of a top HQ instructor talking through the functionality and basic points of the sumo deadlift high pull.

The most common flaws are pulling early with the arms and not generating enough power and speed with the hips. Keep the elbows as high as you can at the top. The arms are follow-through instruments, capitalizing on the momentum created by the hips and legs.

Pay attention to your body when conducting the sumo deadlift high pull. If you feel your arms or shoulders getting especially tired during the lift, you are not opening your hips hard enough at the top. Try making the bar accelerate from the ground to your chin, keeping it as close to the body as possible. You'll be well on your way to a successful lift, as well as gaining the kinesiologic awareness for more complex core-to-extremity movements.

Not only is this movement a great prep for the clean, but it's also the substitution for rowing because it mimics the same motion of a Concept2 rower in the vertical plane instead of the horizontal.



Staff/CrossFit Journal

The sumo deadlift high pull is often mistaken for an upper-body exercise, but it's most efficiently performed by using the lower body to move the bar with explosive hip extension.

The Medicine Ball Clean

WATCH:

1. **Medicine Ball Cleans**
Greg Glassman (Sept. 1, 2004)
Coach presents a fantastically simple article outlining the importance of the med-ball clean and common faults in the movement.
2. **CrossFit: Learning Medicine Ball Cleans**
A perfect bi-panel clip showing Nicole Carroll and other top CrossFit athletes conducting the medicine ball clean, with Coach Glassman talking about its elements.
[\[wmv\]](#)[\[mov\]](#)
3. **Medicine Ball Cleans**
Andrew Thompson
Here's another excellent clip on the med-ball clean.
[\[wmv\]](#)[\[mov\]](#)
4. **Learning the Medicine Ball Clean**
Rob Miller
This is a great seminar clip from a few years ago.
[\[wmv\]](#)[\[mov\]](#)

READ:

Skill Based Warmups for Groups

Tony Budding (Sept. 1, 2006)
This PDF describes how to take a group through a slight variation on our Level 1 seminar approach to teaching the med-ball clean. The essence is there, though, and you can begin to develop proficiency in the clean.

Time to start working with the medicine ball. This is an amazing tool with unlimited applications, and we first used it as a depth gauge for the squat. It's now the pathway to a barbell clean. Pillow-soft and unthreatening, medicine balls create a perfect bridge between the core-to-extremity work done in a sumo deadlift high pull and both Olympic lifts.

Fight hard to feed the power and momentum generated by the hip into the shoulder and the ball (think of your arms as straps attached to the ball, not as levers that bend the ball up to you), then pull yourself under. Again, take note of how and where you feel the strain. Is it in your arms? Your shoulders? Though the med-ball clean is certainly a full-body movement, your legs should bear the brunt of the load.

The med-ball clean is the capstone of the deadlift series. Do not get frustrated: the clean, in any form, is infinitely nuanced and will never be perfect. It will take years to garner a capacity in this lift, so grab a ball and get started!

What about barbell cleans and dumbbell cleans? The mechanics are identical, so learning one develops capacity in the other. We teach the med-ball clean at the Level 1 CrossFit seminars for several reasons. Perhaps the most important is that it's closer to what you'll do outside the gym. More objects on the planet are like medicine balls than barbells or dumbbells. They're hard to grip, they have volume, and they're a little awkward. That said, both barbell and dumbbell cleans are outstanding movements that develop tremendous capacity across broad domains, and they should be practiced often.



Learning a clean with a bar can be challenging. Using a medicine ball removes the pain of having a bar crash onto your shoulders while you practice reaching full hip extension.

Staff/CrossFit Journal

Wall Ball

READ:

[Functionality and Wallball](#)

Greg Glassman (Aug. 1, 2003)

This is a sensational article about the CrossFit view on conditioning using all metabolic pathways and functional movements, leading to a discussion on how to complete the wall-ball exercise.

WATCH:

CrossFit Wall Ball

Here's a great bi-panel clip showing a CrossFit athlete exhibiting both good and bad technique on the wall ball, as well as completing the benchmark WOD Karen in an astoundingly low time.

[\[mov\]](#) [\[wmv\]](#)

Now that we've become familiar with the medicine ball, it's prudent to start using it as a tool for throwing. Wall ball pairs a front squat and push press—perfectly displaying a need for seamless core-to-extremity movement—but requires an additional skill in the form of accuracy.

Make sure you're getting all the way down in the squat, with the crease of the hip below the knee in the bottom, and ensure the ball hits at or above the line of your target (as RX'd is 10 feet with a 20-lb. ball for men and a 14-lb. ball for women). Start with a light ball and work your way up to a heavier one only when you're able to successfully and repeatedly hit your target. Focus on making the ball's impact on your hands as soft and quiet as possible, taking the energy down into your legs and rebounding back out of the bottom.

This is a sensational movement that will not disappoint in its metabolic response. Work at stringing together 10 in a row and you will be well on your way.

Wall ball pairs a front squat and push press but requires an additional skill in the form of accuracy.



Staff/CrossFit Journal

Wall-ball shots pack a great metabolic kick and also introduce accuracy into your workout.

Pull-Ups

READ:

[The Pull-Up](#)

Greg Glassman (April 1, 2003)

This article explains the value of this essential gymnastic movement.

WATCH:

CrossFit: Kipping Pull-Up 1—The Concept

Coach Glassman talks through the basics of a kipping pull-up while watching several top athletes show how to perform the movement.

[\[wmv\]](#)

For an easy progression to increase capacity in the kipping pull-up, the series listed below features sensational athlete and trainer Annie Sakamoto teaching at a CrossFit Level 1 seminar:

The Kipping Pull-Up, Step 1: [\[wmv\]](#)[\[mov\]](#)

The Kipping Pull-Up, Step 2: [\[wmv\]](#)[\[mov\]](#)

The Kipping Pull-Up, Step 3: [\[wmv\]](#)[\[mov\]](#)

The Kipping Pull-Up, Step 4: [\[wmv\]](#)[\[mov\]](#)

WATCH:

1. **Adrian Teaches Kipping, Part 1**

[\[wmv\]](#)[\[mov\]](#)

2. **Adrian Teaches Kipping, Part 2**

[\[wmv\]](#)[\[mov\]](#)

3. **Adrian Teaches Kipping, Using the Hips**

[\[wmv\]](#)[\[mov\]](#)

This last series is another approach to achieving the same ends. There's no one solution. Whatever gets you moving most effectively is best.

And in case you need some motivation to jump-start your quest for pull-ups, check out *Pull-Ups, Pregnant*. [\[wmv\]](#)

Pull-ups, along with air squats, are the backbone of CrossFit and elite fitness.

Chris Spealler teaches the kipping pull-up at a Level 1 cert. Master it and you're well on your way to finding success in WODs such as Fran and Angie.

Pull-ups, along with air squats, are the backbone of CrossFit and elite fitness. The importance of pulling your body up to an object cannot be overstated. Work through the progression above in warm-ups, cool-downs and workouts. Pull-ups can be done by everyone—jumping, band or kipping pull-ups are all important—and no exercise regime is complete without a solid base on the pull-up bar.

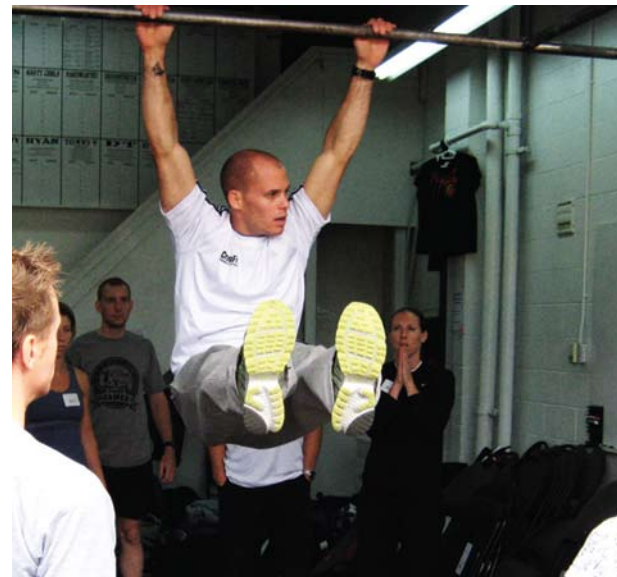
The only thing that needs to be added to the above clips is a quick piece on hand care. Buy a hand file and keep your calluses down. Though impervious to a puncture, calluses have the tendency to tear off in one giant chunk when doing high-rep pull-ups. Also, understand that moisture is your enemy when it comes to avoiding rips on your hands. Get into the habit of drying your hands off on your shirt or shorts during a WOD to keep the sweat off. Chalk will also help with this by keeping smooth and dry contact with the bar.

Lastly, and perhaps most importantly, mentally check in with your hands as you're pulling. If and when you feel "hot spots," slightly change the way you're gripping the bar during your pull. The toughest skin in the world will not withstand high-rep pull-ups rubbing one spot on your hand.

READ:

Hand Rips: Causes, Treatments and Prevention

Phil Savage (April 1, 2008)



Staff/CrossFit Journal

Push-Ups

READ:

[The Push-Up](#)

Greg Glassman (March 1, 2003).

This PDF details the performance steps, common faults and advanced techniques of the push-up and provides links to more info.

WATCH:

1. **Push-Up Standards**

Top athlete Annie Sakamoto demonstrates good and bad push-up technique.

[\[wmv\]](#)[\[mov\]](#)

2. **Developing Push-Ups**

This video gives a series of modifications that help you develop the strength to do standard push-ups.

[\[wmv\]](#)[\[mov\]](#)

3. **Playing with Push-Ups**

This video has several athletes playing with some of the common (and uncommon) variations of the movement.

[\[wmv\]](#)[\[mov\]](#)

In my opinion, push-ups are the most-cheated CrossFit movement. One rep: all the way down (touch your chest to the ground) and all the way up with elbows locked out and an active shoulder (think of pushing the shoulder toward the ground and your body into the air). If you have trouble with this, go from your knees and use the same points of performance. If you still cannot complete a full rep, hook a band to the pull-up bar, loop it under your armpits across your chest, and let the band's resistance help you out of the bottom.



Proper depth on a push-up is all the way to the ground, and a good trainer will make sure you hit that depth on every rep.

What About Abs?

WATCH:

1. **What About Abs?**

Coach Glassman answers the question by saying ab work for CrossFitters is all about midline stabilization.

[\[wmv\]](#)[\[mov\]](#)

2. **Glute-Ham Sit-Up Elements Lecture Clip**

The GHD sit-up is not a beginner movement, but it comes up frequently in the main-site workouts. This clip explains why the GHD sit-up is so potent and effective, and also why it's potentially dangerous.

[\[wmv\]](#)[\[mov\]](#)

READ:

1. **Three Important Ab Exercises**

Greg Glassman (May 1, 2003)

Coach talks about the GHD sit-up, the hollow rock and the L-sit.

2. **Calisthenics**

Roger Harrell (May 1, 2006)

Here's a comprehensive article by one of CrossFit's gymnasts on a variety of calisthenics: push-ups and sit-ups and their variations.



The GHD sit-up is tremendously effective, but beginners should approach the movement with caution.



***Finding the right amount of intensity is important.
Too much will leave you overly sore, while too little won't get you the results you want.***

Still, sit-ups do come up in workouts, and the best variation for beginners is the basic sit-up, made much more comfortable and effective with a towel or AbMat under the lumbar spine.

When doing a standard sit-up without a towel or AbMat, the lumbar spine bottoms out on the ground as the chest starts to come up, leaving your body with nothing to lever against. This forces the hip flexors to pull up the trunk of the body and creates a bi-phasic movement. Though nothing is functionally wrong with this, it has the tendency to leave out development of the lower portion of the abdominal wall. By sticking something under the lumbar spine, be it a T-shirt, towel or AbMat, we are now able to lever off each part of the back, forcing awareness and strength along the entirety of the lower trunk.

One drill you can do to strengthen the abs is a very slow, momentum-free butterfly AbMat sit-up. Lying down on your back with the AbMat under your lumbar spine, put the soles of your feet together with your knees splayed out. Straighten your arms low over your body with your palms together. Your head should rest on the ground. Very slowly, without throwing your head or arms, squeeze yourself up until you are sitting completely upright (this wouldn't be possible without the AbMat or a towel). Lower down and repeat. Start with just a few

reps and build up over time. (This is not recommended for timed workouts such as Angie or Annie, in which you want to move as fast as you can.)

Scaling, Part 2

In the previous article, we introduced a few approaches to scaling. These can be applied to any given workout. As stated before, you should vary the approach you use to scaling because the "constant variation" component of CrossFit applies here also. If last time you reduced the load but kept the reps the same, this time keep the load the same (or scale less, depending on how much you reduced the RX'd load last time) and do fewer reps. Remember, the idea is to work as hard as you reasonably and sustainably can. Some variations work strength more, some stamina, some metabolic conditioning. When you're just starting out, chances are pretty good you need to work on all 10 general physical skills.

Once you've gotten to the point where you are doing scaled workouts regularly, you need to start thinking about scaling methods as they apply to weeks and months. You have to think about progress and recovery. Of course you're going to be sore (if you're not, you're not working hard enough)—but are you too sore? Are you excited to be at the gym? How are your moods?

Your goal is to find a happy medium between overtraining and undertraining. Unfortunately, no formula exists, and many, many factors play into it. Beyond the workouts themselves, you have to consider the quantity and quality of your food intake and sleep, as well as other factors such as work, home life, stress, etc. Get rid of the word "should" and pay attention to what "is."

There is nothing wrong with taking an extra day off here and there, especially in the beginning. There's also nothing wrong with backing off on a workout if you overestimate what you can do. With beginners, I always say scale more, more often. This isn't always true for intermediate and elite athletes, but it is for beginners.

It's a long game, and you're much better off leaving a little in the tank for the next day than overdoing it and risking quitting. Remember that your CrossFit habit is still young. You have to nurture it gently. Too many beginners quit early in their quest for fitness because they bite off more than they can chew too early.

squat, any scaling of this workout that would make sense for you would move you very far away from the original intent. These workouts are designed to exceed the limitations of the world's best athletes. Not all WODs can and should be scaled for anyone at any time.

You are performing a sophisticated experiment on your body and mind. Play close attention to what's happening. Don't overdo it and don't under-do it. Practice your mechanics and play with intensity. Also, log all workouts, times and weights so you can chart and analyze your performance.

And, as usual, Coach Glassman summed it up best. He was recently asked by someone from a new affiliate what it takes to be successful in the most general terms. From what I can see, this approach should probably be applied to every venture in life:

"Don't quit, always try to make what you do better, and have fun with it."

Scaling: your goal is to find a happy medium between overtraining and undertraining.

All that being said, you can be too gentle. The danger here is that you won't see the results you deserve. Now is the time to experiment with intensity. How hard can you go without overdoing it? If you don't feel totally spent the second you finish the workout, chances are good you could go harder. Next workout, ramp it up a bit. See what happens.

What Workouts Should I Do?

This is a great question. We generally recommend following the CrossFit.com workouts (scaled appropriately) for a number of reasons. For beginners, however, following the main site might not be ideal, even scaled. Of course, it's fun to keep up with the rest of the CrossFit world, and often that outweighs any negatives.

But there are negatives. For example, the Hero workout Tommy V is many heavy thrusters and rope climbs. If you're already struggling with pull-ups and your front



About the Author

Todd Widman is a former Marine and one of CrossFit's top trainers. He spends a significant portion of his time traveling around the country (and world) working the CrossFit Level 1 and Level 2 certification seminars.