THE CrossFit JOURNAL

The Forgotten Part of the Deadlift

The lift doesn't stop when the bar is at the top. CrossFitting chiropractor John Zimmer provides advice on how to properly deadlift to avoid injury.

By John Zimmer **December 2011**

Evan St. Clair/Again Faster Equipment

If you've ever picked up anything from the floor, you've deadlifted. And after you pick something up, chances are you'll need to put it down. Returning the bar to the floor often is the forgotten part of the deadlift.

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CrossFit prides itself on its training methods having athletic transferability, and learning how to properly set down a heavy weight has far more practical application than dropping it from the waist.

When it comes to the deadlift, the emphasis is on getting the weight from the floor to the lockout position. In powerlifting, it is the only part of the lift that matters. Often, any thought of controlling the bar's return to the floor is only to protect the lifting platform or metal weights.

First of all, people don't care how much weight you can lower. They only care how much you can lift. Simply dropping the bar lets the lifter focus on the hardest part of the movement: the lift off the floor. Thus, no energy is wasted in lowering the bar. When the bar comes to a complete stop on the floor, the lifter often has nothing left to make the next rep easier. The lifter must overcome the tendency of a heavy barbell at rest to stay at rest. The touch-and-go method from the floor is taken out of play on subsequent reps (if there are any), and there is no advantage of the stretch-shortening cycle from the involved muscles. For pure pulling strength, it is recommended to start each deadlift from a dead stop.

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But if the workout is focused on muscle endurance, conditioning or maximum work output (instead of maximum strength), then dropping the bar on every rep has several disadvantages. Dropping and re-gripping slows your cycle time. Also, if you are not taking advantage of the touch-and-go method from the floor in a controlled descent, then you are slowing your cycle time and expending unnecessary energy for each rep. If you can groove this lift for reps with smooth, piston-like efficiency, then conditioning workouts that include other lifts that involve pulling from the floor will benefit as well.

Descent From the Lockout Position

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1. The head is kept at roughly the same angle by looking at the same spot on the floor as during the lift. Think of keeping a tennis ball under the chin.
2. Keep the chest up and weight back on the heels.

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3. The bar's descent to the floor is initiated by reaching the butt back.

Descent continued ...

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Expending the energy to control the descent of the bar to the floor may not only save time, but it may also save energy. Our muscles have more eccentric strength than they do concentric strength. They can bear a load about 10-40 percent greater when contracting while being lengthened (the eccentric phase) than they can when contracting while being shortened (the concentric phase). Expending a small amount of energy to control the descent of the bar to the floor might yield a greater return in terms of the advantages gained by the stretch-shortening cycle and from elasticity of the plates in contact with the floor from the touch-and-go method during high reps. However, the lifter should not use the arms, shoulders or hip flexors to accelerate the bar to the floor in an attempt to bounce the bar off the ground.

The stretch reflex can be an advantage at the end of a controlled descent. The hip extensors and the hamstrings are being stretched as the bar reaches the floor. That can be used as a pre-stretch to then contract the hip extensors and hamstrings as the lifter takes advantage of the touch-and-go of the bar from the floor. This should be a controlled descent to the floor with anticipation of the floor and the beginning of the next rep. The quicker the transition from the eccentric phase to the concentric phase, the more energy is available for the concentric contraction. This is true for high-rep deadlifts, for the dip and drive beginning a push-press or jerk, or in a countermovement arm swing before a max-height jump.

> If you can't get the bar off the floor properly, it would be silly to focus on setting it down properly.

The Pull

The deadlift is one of the nine essential movements taught in CrossFit. Arguably, most CrossFitters know what a single deadlift should look like. But what happens when deadlifting for high reps for time? The first rep looks like a deadlift. With good form, subsequent reps look identical or at least very similar.

Descent continued ...

4. The lats stay activated to keep the bar close to the body and over the center of gravity.

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5. Keep reaching the butt back until the bar clears the knees.
6. When the bar clears the knees, the knees come forward over the bar.

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7. Anticipate the touch-and-go from the floor. Again, when training for maximum pulling strength, begin each deadlift from a dead stop.
8. When high reps are involved, the goal is to finish each rep in an ideal position to immediately begin the next pull.

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Form often breaks down on the return when an athlete is doing multiple deadlift reps, placing a strain on the back and hamstrings.

Things usually start out well. At the beginning of the pull, the barbell is over the mid-foot and in contact with the mid-shin. The back is locked in extension and the shoulders are in front of the bar. The lats are activated to keep the bar from traveling forward of the lifter's center of gravity. Let's assume the lifter keeps the spine in extension and keeps the same spine angle until the barbell clears the knees. Then the torso becomes more upright as the knees and hips lock out to complete the first rep. The top of the lift is complete when we have midline stability. The knees are locked out, the hips are locked out, and the shoulders are in line with the hips and ankles.

Sometimes things go wrong on the ascent, whether it's lack of extension in the spine on set-up, letting the bar get forward of the center of gravity during the lift, raising the hips faster than the shoulders, letting the spine round forward or all of the above. All these breaks in form are incredibly important and should be addressed first. If you can't get the bar off the floor properly, it would be silly to focus on setting it down properly. Once you've got that down, let's move on to the return.

The Return

As previously noted, you can just let go of the bar. This is often more of a necessity than a choice when fatigue sets in. When you let go, make sure your kneecaps are out of the way. For the next rep, get your hands back on the bar, reset your position and begin your next lift.

If you've ever been to a competition when deadlifts for reps are involved, chances are you've seen the old "bend and bounce."

If you've ever been to a competition when deadlifts for reps are involved, chances are you've seen the old "bend and bounce." The lifter begins the return by bending at the waist, keeping the legs straight, and reaching with the arms. This pulls the shoulders toward the floor and the chest down and forward, and it rounds the low back. At best, subsequent lifts look like a series of straight-legged deadlifts. This movement puts greater strain on the smaller muscles in the low back and hamstrings, rather than the bigger muscle groups such as the glutes and hip extensors. At worst, the next rep looks like the Hunchback of Notre Dame starting a lawnmower.

A proper return is as follows:

Keep the chest up and the weight back on the heels.

Reach the butt back. The return should be hip initiated, similar to the hip initiation to begin a squat.

The lats stay activated to keep the bar close to the body and over the center of gravity.

Keep reaching the butt back until the bar clears the knees.

Once the bar clears the knees, the knees come forward as the bar is lowered.

Ideally, the lifter finishes in a strong pulling position to begin the next lift.

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Common Mistake: "Reaching for the Floor"

When deadlifting for high reps, common faults on the return begin with either "looking" or "reaching" the bar to the floor. Instead of keeping the chest up and reaching the butt back, the lifter instinctively looks down. We also see the arms and shoulders reach toward the floor with the bar. This starts a chain reaction of horrible positioning. The shoulders are pulled forward, rounding the upper back out of position. The upper torso is pulled forward of the lifter's center of gravity. This pulls against the low back and rounds it into flexion.

Unfortunately, this is the easiest way to get the bar back to the floor with the hands still on the bar. All it takes is a reach of the arms and a bend forward at the waist. It keeps the knees out of the way of the bar and it takes very little effort, focus or technique. It also sets the lifter in a terrible position for the next lift. If this were an attempt at a single rep, it would be an issue. If there are multiple reps, it becomes much more important. And if this workout is for time, pulling from a weak position is a real risk for back injury. And if the workout for time is part of a competition, the lifter might feel greater pressure to finish quickly at the expense of form and technique.

> Keep the chest up. Reach the butt back. As you do this, the bar will begin its controlled descent to the platform and your spine will still be intact.

When returning the bar to the floor, think of the hip initiation used with a proper squat. Keep the chest up. Reach the butt back. As you do this, the bar will begin its controlled descent to the platform and your spine will still be intact.

Common Faults

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1. The head flexes and the neck rounds forward.
2. The arms "reach" the bar towards the floor.
3. The low back begins to bend forward.

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4. The shoulders are pulled forward and the upper back is rounded.

Faults continued ...

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The lats stay activated to keep the bar close to the body and in plane with the front of the ankle. The butt keeps reaching back until the bar clears the knees. When the bar clears the knees, the knees go forward over the bar. As the knees come forward, anticipate the touch-and-go from the floor. (Again, when training for maximum pulling strength, begin each deadlift from a dead stop.) When high reps are involved, the goal is to finish each rep in an ideal position to immediately begin the next pull.

The hook grip has its advantages during high-rep workouts using moderate weight. It can help you maintain your grip with less energy. And just like the use of the hook grip during Olympic lifts, the hook grip does not require as much activation of the forearm muscles. The lifter might be less likely to initiate the return to the floor with the arms or shoulders, instead using a more hip-initiated return. The lifter might also save some energy during the deadlifts, and the forearms might be less fatigued for additional work, such as pull-ups, muscles-ups and kettlebell swings.

Focus on Form

First learn the proper movement patterning with a PVC pipe. Then practice with a light weight while using good form. When your form is consistent over several workouts, slowly begin to add weight. Mix in strength workouts in your programming where you are deadlifting each rep from a dead stop. Have other workouts where deadlifts for high reps are a component. Mix it up.

The deadlift isn't dead. Long live the deadlift.

✦

About the author

Courtesy of John Zimmer

John Zimmer is the team chiropractor for Gentle Giant Moving Co., where he works with CrossFitters, rowers, runners, climbers, rugby players and martial artists who also happen to move furniture. In his spare time he can be seen hitting the WOD at CrossFit Boston.

Faults Continued ...

5. The center of gravity becomes anterior weight bearing.

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6. The chest falls down and forward.
7. Rounding in the low back is more pronounced.

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8. Here, the repetition finishes with the hips high and the low back rounded.

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