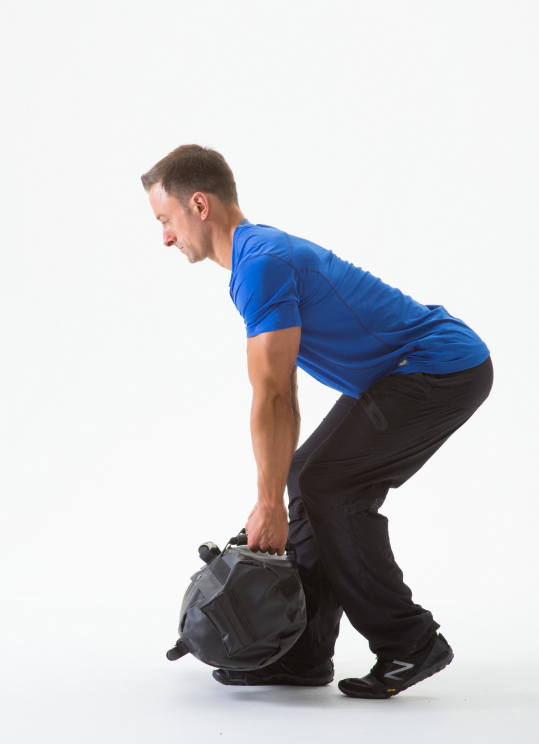
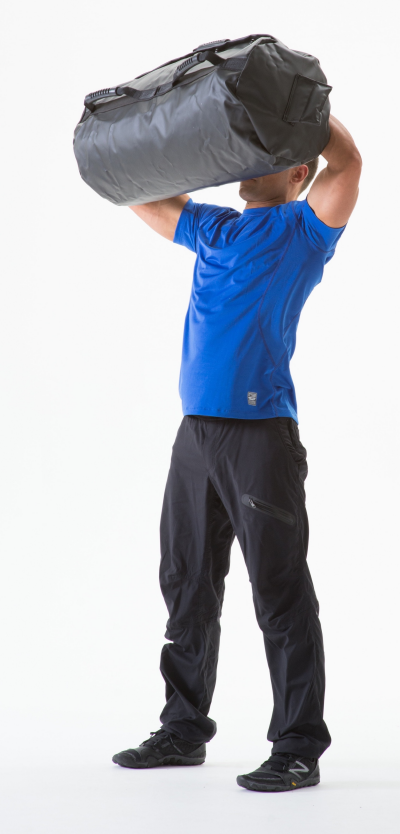
Building the Hip Hinge Pattern





Beyond Deadlifting

"People need to spend less time under the bar", HOLD ON put down the pitchforks and torches, these aren't my words! Before the lynch mob starts to head out, these are actually the words from one of the industry's most well respected researchers on spinal health, Dr. Stuart McGill.

Yes, back at a fitness conference in Rhode Island, Dr. Stuart McGill uttered these words. The same man that is referenced and respected by just about every strength coach and serious strength athlete. But why? It sounds like this could be one of those "functional training" articles that we laugh as lifters of serious iron right?

To be honest, I probably would have been one of those people rolling my eyes at such an idea about 10 years ago. This is especially true having been someone using heavy barbell lifts for a sport I fell in love with, Strongman. Yet, this same training experience taught me strong lessons that would forever open my eyes to the idea that such a statement could actually be true.

In fact, it has quickly become one of my favorite question to ask coaches and lifters, "why do you deadlift?" After all most consider the deadlift as THE exercise in hip hinge motions. I have found that there are a bunch of interpretations, but is there any strength behind the arguments?

Probably most important, I have also found debating the value of the deadlift is right up there with politics and religion. So, if you are open minded let's take a strong look if the deadlift is the right exercise for you!

Reason #1: "Makes Me Strong"

Strength, is right up there with one of the most vague statements and standards we set forth for ourselves. Heck, Dan John makes a great point that the job of a strength coach is to "get people strong." However, what that means can vary greatly and surprisingly needs to be relevant to the training goal.

Many "gym athletes" have made the deadlift the measure of their strength. It is rather easy to do so because it is easy to measure. Yet, it depends upon how we define strength. For most it is simply the gage of how much weight they can lift. Therefore, "strength" becomes load oriented. That would appear to make sense but we have seen many athletes from wrestlers, gymnasts, martial artists, etc. that are very strong, but probably won't win any contests in the gym.

The deadlift is a stable, predictable, and easy to groove movement, so is it really a good measure of our strength in sporting and most everyday activities? If we are to make a correlation of strength to "functional" activities we need to develop drills that more accurately challenge our bodies in these measures. These are my interpretations from McGill and others work. A more relevant measure of functional strength may have to include the following standards:

Measures of stability

-Lower Leg/Ankle: Often overlooked, the foot and ankle can influence knee, hip, low back, and even cervical alignment.

-Hip Stability: "healthy gluteal patterns are needed to spare the back."(McGill, 2004)

Abnormal motor patterns

-"Gluteal amnesia": Not being able to properly activate the gluteal complex will lead to substitution with the hamstrings and erector spinae creating more stress on the low back during hip extension.

Doesn't the deadlift improve gluteal strength? Depends which muscles you are speaking about. According to Strength Coach, Eric Cressey, "*using single-leg exercises with correct technique elicits equal contribution of the hip abductors and adductors; the abductors have to "cancel out" the commonly dominant adductors, or else your knee falls in."* Coach Cressey is referring to the fact that many people build dominance in the very dominant muscles like glute maximus and miss the important of the medius.

Why is glute medius so important, after all, isn't our maximus our power center? According to Dr. Emily Splichal, the glute medius does a lot more than you may think!

"Weak or underactive gluteus medius has been associated with an increase risk of injury to the lower extremity and with gait abnormalities, such as a Trendelenburg gait. Studies have demonstrated a noted difference in anterior and middle gluteus medius strength when compared to posterior division strength. With the posterior division being responsible for external rotation and frontal plane knee and foot alignment, exercise programs specific to posterior division activation could play an important role in injury prevention and improving lower extremity function."

The point? The bilateral deadlift is one of our many hip hinge exercises. If we understand the true intent of "functional strength" we will see that our options in challenging the hip hinge patter beyond just going heavier is quite extensive. Do we deadlift? Absolutely, my question is "which one?" As you move through our hip hinge progressions you will gain a better understanding of the hip hinge pattern and end up asking the same question!

Reason #2 "Very Functional"

People often state that the deadlift carries over to many daily functions. The truth of the matter is that the deadlift has many holes in its translation to most sporting and daily functions.

-Dominant Single Plane Motion: The deadlift while a free weight movement, by its performance and design is only movement in one dominant plane, sagittal. However, most daily and sporting activities require us to move and stabilize in many planes of motion. The majority of low back issues according to McGill are not due to maximal strength issues, rather strength-endurance and

bad motor patterns. Because the deadlift is such a stable and grooved exercise it is easy to build compensation patterns that could actually be detrimental to our low back health.

Looking at sporting performance, the deadlift may lose its benefit equally as quickly. Legendary biomechanics expert and one of the first U.S. coaches to spend time with Soviet sport coaches, Dr. Michael Yessis, states that the Russians found two main causes of injury.

-Extreme Range of Motion -Eccentric Loads
(Yessis, 2008)

Leaning too hard on the deadlift for "sports performance" training can be misleading as these two variables are not addressed. In fact, many coaches will remove the eccentric component to the deadlift all together.

Reason #3 "Works Posterior Chain"

When we discuss the ever sought out "posterior chain" for power and strength. The synergy of the hamstring, glutes, to produce that tremendous performance in strength and power sports is paramount. Yet, we would make it out to be the only way to really accomplish this goal is to deadlift.

The hip hinge in deadlifting is a tremendous and vital movement to learn for both performance and maintaining low back health. As we continue to add load to the movement we can see that the point of deadlifting could be potentially lost. In elite powerlifters (who you would assume have the must muscular coordination in the deadlift) there exists a large amount of variability in how the joints are loaded. (Cholewicki, 1991) Yes, ELITE powerlifters, not people that use the deadlift occasionally in their training programs.

Most lifters and coaches forget about the term "optimal strength". This term refers to the idea that at a certain point in loading, the chosen lift ceases to provide a carryover in the performance goal. In training athletes this is extremely important to realize as the cost in trying to make an athlete go from a deadlift of 450 to 500 may be significant to their movement skills, but have little benefit to their performance. For the non-powerlifting lifter, the same decisions need to be made in programming and time spent performing certain lifts and the loading parameters around them. Can we create the same or similar posterior chain training in less spinal compressive movements?

Reason #4 "I Like Lifting Heavy Stuff"

I can't and won't argue this point, heck, it is fun to lift big loads off the ground and DVRT will definitely challenge you in this manner (even if it is in a new way). However, as I saw my loads get heavier and heavier the more time I had to spend warming-up, pre-habbing myself, doing corrective exercise, etc. It seemed as though more time was spent preparing and healing from the lift than it was actually training.

It can be a trap as a coach to make our clients perform the methods and drills we love to do ourselves. Yet, if we begin to look at our programs with a critical eye we may be able to develop far more effective programs and keep our overall goal that Dr. McGill outlined as most important, to move well and be strong!

According to McGill, the following would represent the proper progression of programming. The question is are you following such a philosophy? It is the goal of DVRT to do just that!

1. Corrective and therapeutic exercise.
2. Groove appropriate and perfect motion and motor patterns.
3. Build whole-body and joint stability (mobility at some joints such as the hips and stability through the lumbar/core region).
4. Increase endurance

5. Build Strength

6. Develop speed, power, and agility.

What Do I Do?

The deadlift can serve as a great base for teaching the hip hinge and developing some general strength. However, we should look to progress in these movements after we establish these patterns at appropriate loads. Progressing means moving to more complex patterns of movement, speeds, and body positions.

The Influence of Single Leg Training:

I know, no one ever wants to wear the t-shirt "member of the 90 pound dumbbell single leg deadlift club", but in all honesty, these movements may take your training and performance further than the "600 pound deadlift club".

This also is not a debate about using single leg lifts compared to bilateral lifts. Rather a thought process that at a certain point the bilateral lifts have diminishing returns. When does loading to a certain point diminish the quality of the movement and where the costs of compression and shear forces become stronger than the benefits?

The view here on single leg training has little to do with providing symmetry to the body. The late Dr. Mel Siff stated the falsehood of trying to make athletes "symmetrical"

"In all tests which presume to measure bilateral balance, stability and strength ratios, it is essential to remember that everyone displays functional asymmetry, so that small to moderate differences in all of these factors tends to be rather meaningless. Humans are not symmetric machines and it can often be more damaging to try to alter "natural asymmetry" than it is to leave it alone."-(Siff, 2007)

Rather, we are looking to "activate the gluteus immediately to assist in the frontal plane hip drive necessary for leaping, running, etc," (McGill, 2004).

It is hard to argue the value of the single leg training, but let's face it. TRUE single leg exercises are quite difficult to teach and that is why many coaches default to predominately programming the load variable. If we can change how we teach the progressions to single leg work then we can actually create an environment where not only are these valuable exercises, they are also accessible to far more people.

Asymmetrical Loading

Coaches are beginning to embrace the idea of imbalanced loading on the body. Asymmetrical loading exercises can effectively train stability in the spine and trunk again as McGill writes, "The asymmetrical kettlebell carry uniquely challenges the lateral musculature (quadratus lumborum and oblique abdominal wall) in a way never possible with the squat. Yet, this creates necessary ability for any person who runs and cuts, carries a load and son on. The suitcase carry is another variation suitable for many advanced clients. "

The above demonstrates one type of asymmetrical loading. In DVRT we can create a wide array of such drills, especially built within a progressive framework and a systemized one as well. The result becomes not just a stronger body, but a more resilient one as well.

The Shoulder Squat is an example of a more advanced asymmetrical loading drill in the DVRT system.

Hip Hinge #1: The Deadlift: Watch The Video HERE

Any movement in the DVRT system can be regressed just as easily as it can be made more challenging. Understanding how to regress a movement makes the training experience far more beneficial. The deadlift and bent-over row provide us the ability make sure we establish good habits in the hip hinge pattern.

The deadlift is often overlooked with the Ultimate Sandbag (USB). One of the best means in teaching the hip hinge, the deadlift not only strengthens the muscles of the hip hinge, but also gives a great deal of feedback upon the movement. For example, if the knees come in contact with the forearms or the knees go through the handles then we know that our lifter is squatting and NOT hip hinging. This is important for building a strong foundation of the hip hinge pattern.

Because of the shoulder position used in the USB deadlift we also can strengthen a great deal of the thoracic spine muscles that are actually the reason most people fail in the deadlift. By improving the strength and aligning the thoracic spine will help build the foundation for all other DVRT hip hinge patterns.

Deadlift Benefits:

- Teaches foundational alignment of hip hinge
- Proper upper body positioning to remove load from low back
- Demonstrates the groove of the hip hinge
- Gives feedback upon squatting vs. hip hinge

Keys in Performance of the Deadlift:

-Make sure the broad side of the Ultimate Sandbag is in contact with the shins.

-Hold onto the neutral grip handles and “corkscrew” the shoulders so the crease of the elbow is pointing forwards.

-Pull the shoulder blades “down and back”

-Hip hinge, don’t squat, so that there is an ever small gap between the elbows and the knees.

-Chin should be gently “tucked” so the head remains in a neutral position.

-Feet should be about hip width apart, the same as if you were asked to jump has high as possible.

-Push through the feet to stand as tall as possible.

-Make sure to “finish” the lift by having the gluteals become tight

-Reverse the motion by sliding the USB down the body without any rounding from the shoulders.

Proper start and end position with tactile cueing to create tension and extension within the body

NOTE: Understand if you use smaller USBs or clients do not possess the proper flexibility you will have to elevate the weight.

The common squat pattern that will alter the movement of the correct deadlift position.

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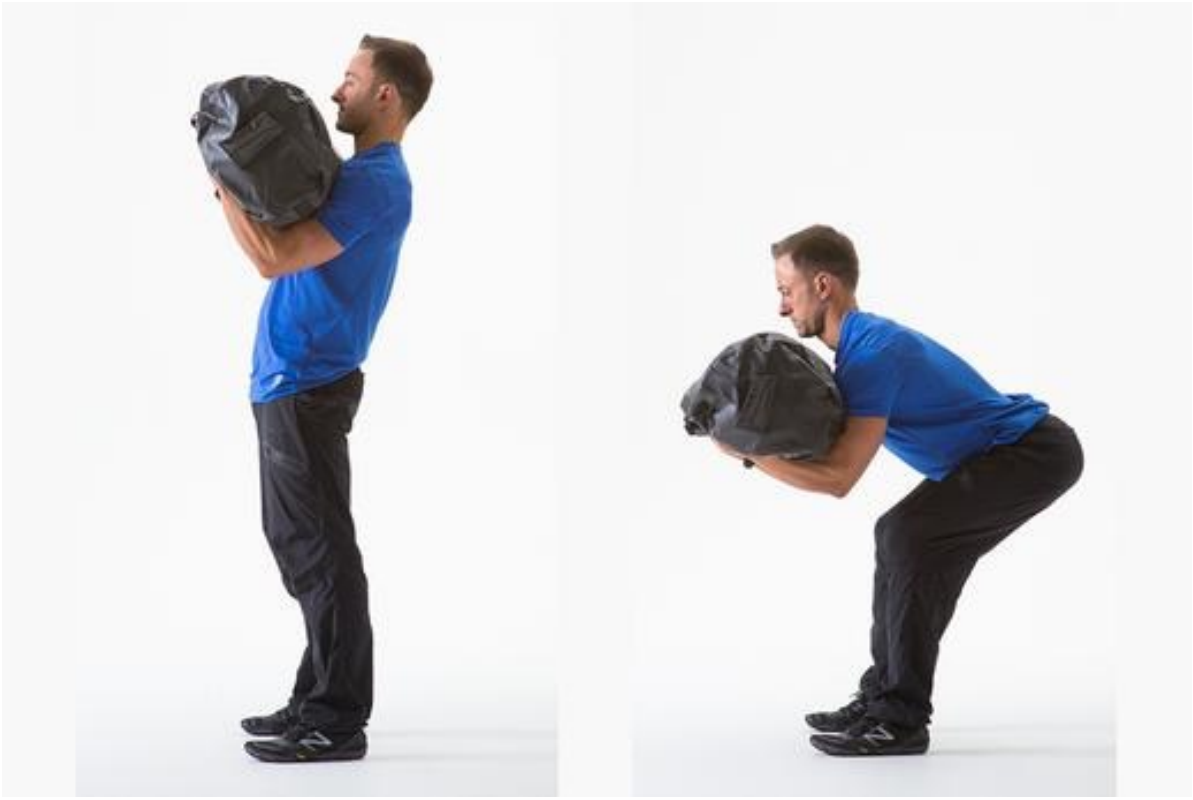
Hip Hinge #2: Front Loaded Good Mornings: Watch Video HERE

Yes, we need to know how to get the Ultimate Sandbag into the proper position, but becoming a master of the Power Clean is not actually necessary at this point. The Front Loaded Good Morning teaches many important aspects of movement.

In DVRT we tend to change the holding position of lower body movements before we alter body position. The Front Loaded Good Morning follows this concept and by doing so we can work on some faults that are very common in a proper hip hinge. That would include proper integration of the upper body, core stability, and learning to create force from the ground up and not through the low back. Before we introduce more unstable environments or concepts such as speed, we want to have great proficiency in the Front Loaded Good Morning.

The Front Loaded Good Morning can be used to enhance power movements with the Ultimate Sandbag, but also all power movements. A great example is the kettlebell swing. Due to the large lever arm and speed of the swing, it can be sometimes challenging to teach. Using the Front



Loaded Good Morning gives us an opportunity to teach the same alignment/posture, and create force from the ground up. Try a few reps of the Front Loaded Good Morning and then some kettlebell swings and see if you don't feel more powerful.

Knee angle can change slightly depending upon mobility. Neither locked legs or heavily bent knees are ideal for the Front Loaded Good Morning

Keys In Performance of the Front Loaded Good Morning:

- Power Clean the Ultimate Sandbag into the Front Loaded position.
- Keep the elbows close to the ribs and pull the USB into the body.
- Have a soft bend in the knees and initiate the movement by pushing the pelvis back.
- As the hips begin to flex, continue to pull the weight into the body (the elbows may begin to elevate forward, but not out to the side).
- The torso and upper back position should not change.
- Take a pause from 1-5 seconds then drive through the feet to return to the standing position.

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Stop Now and Please Work on the Following Workouts

The following workout teaches how different exercises can teach similar concepts that are important to master before proceeding to more advanced programming. Such workouts also help show that your programs don't have to be complex to be highly effective. These workouts are meant to be practice sessions and show parallels between different movements. Please work through them and practice perfect repetitions, speed is not key.

Deadlift-Plank Workout Watch HERE

Exercise	Sets	Repetitions	Rest Intervals
Deadlift	3	60-45-30 Seconds	15 seconds
Front Plank	3	60-45-30 Seconds	15 seconds

Hip Hinge #3: Sprinter and Rear Step Deadlift: Watch Video HERE

The Sprinter Deadlift provides slight instability in body position. This allows us to see compensations through the trunk and pelvis. Lateral instability and lack of anti-rotational strength usually will show during the Sprinter Deadlift. This comes in the form of a lateral sway (usually to the side of the stance leg) and rotation of the pelvis.

During incremental changes of instability we will often see the lifter wanting to maintain stability. A very common change in performance from the client is rounding in the shoulders as well as flexion in the arms. Watching for these more subtle changes to their posture will allow you to identify if the client sees the de-stabilization as a very high intensity type of drill.

Sprinter Deadlift Leads to Rear Step-Length of Step Determined by Ability to Resist Movement

Keys in Performance of the Sprinter /Rear Step Deadlift:

- Performance of the Sprinter Deadlift is the same as the bilateral deadlift.
- There is a heel to toe approximate relationship with the feet.
- Weight distribution is about 60% on the lead leg and 40% on rear leg through ball of foot.
- Watch for lateral sway towards stance leg.
- Cue the hip that the weight shift moves away from to give appropriate feedback.
- Observe for loss of tension in between the shoulder blades and arms.
- After the Staggered position is cleared we can incrementally increase the challenge by adding a longer step back into the motion.
- Tension still needs to be placed into the ball of the foot of rear leg.
- The length of the step is determined by the lifter's ability to resist any rotation or lateral sway.

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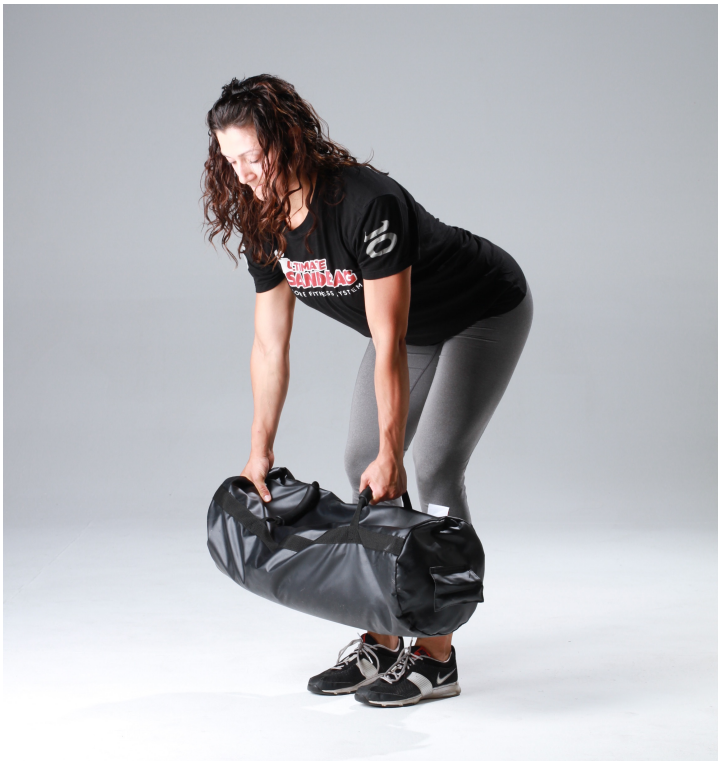
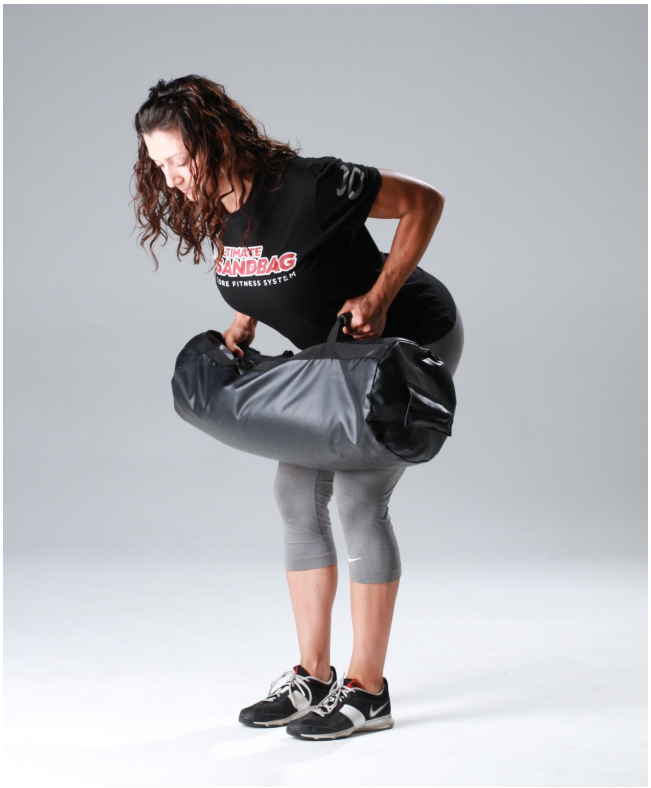
Hip Hinge #4: Bent-Over Row: Watch Video HERE

The bent-over row provides us with a different way of training the hip hinge. Instead of a dynamic hip flexion and hip extension moment as our primary goal, the bent-over row is a static hip hinge. Strength-endurance has been more closely correlated with a healthy back and teaching the bent-over row can give us some insight to if the lifter has the proper body awareness and strength-endurance to continue to further hip hinging patterns.

The bent-over row provides us two additional benefits that will carry over greatly to not just the performance of the Clean and Press, but other more dynamic DVRT drills. These two factors are the front plank (anti-flexion) type of of movement that happens at the trunk and the scapular retraction and deceleration of the weight.

Especially during the downward phase of drills such as Cleans, High Pulls, and Snatches, there is a great deal of load on the eccentric action. Learning how to "catch" the weight with both the hips and lock the upper back in place is crucial in proper dispersement of the load.





Keys in Performance of the Bent-Over Row:

- Perform one deadlift to the top position.
- Slowly lower the trunk in a hip hinge until the trunk is parallel to the ground or slightly prior to any loss in lower back curvature.
- Keeping a slight bend in the knees, slowly pull the USB towards the stomach area be tween the umbilical and chest.
- Once the shoulder blades are fully pulled together, slowly lower the USB.
- During the lowering phase, make sure to avoid rounding of upper or lower back.
- ‘• Maintain the same hip hinge throughout the drill without letting the trunk angle increase.

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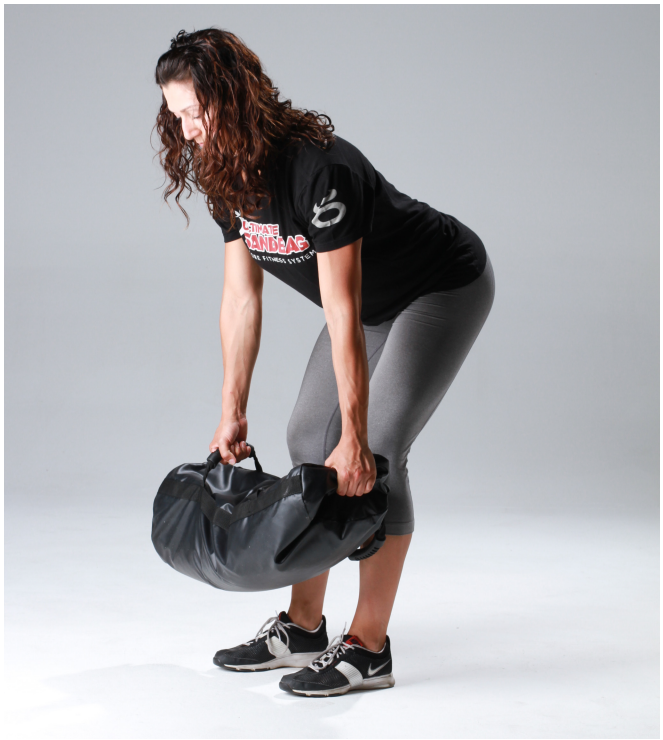


With the Ultimate Sandbag and DVRT we have the option of changing body/loading position to create a progression of the rowing movement and stress different systems.

Perform Workout

Deadlift-Row Series: Most Complex to Least Complex

The workout below is to show how we program in DVRT. When we teach DVRT exercises we move from more stable environments to unstable ones. When we actually create workouts we begin with more unstable (challenging) drills and as fatigue accumulates we move to more stable positions and drills. The following shows how instead of changing volume or load we can manipulate these other options to create an even more powerful training effect.

Exercise	Sets	Repetitions	Rest Intervals
Rear Step Deadlift with Row	1	5 per side	15 seconds
Staggered Deadlift with Row	1	5 per side	15 seconds
Deadlift with Row	1	10	30 seconds then repeat two more times

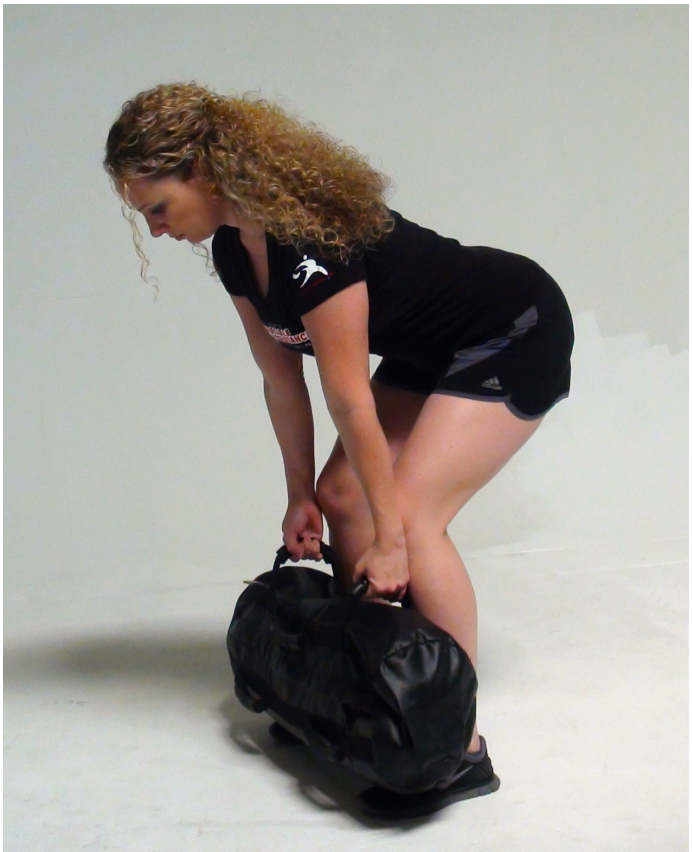
Sprinter Stance Row with Off-Set Grip

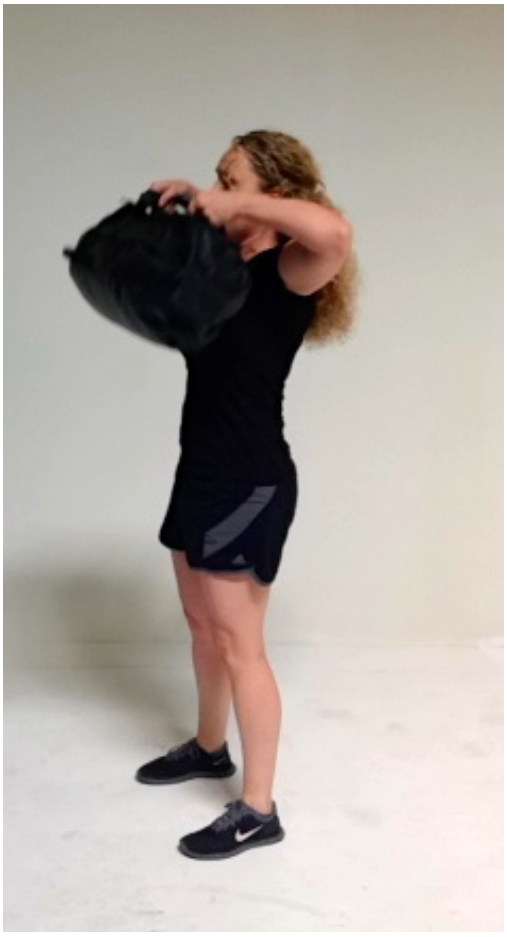
(Change in Body & Holding Position)

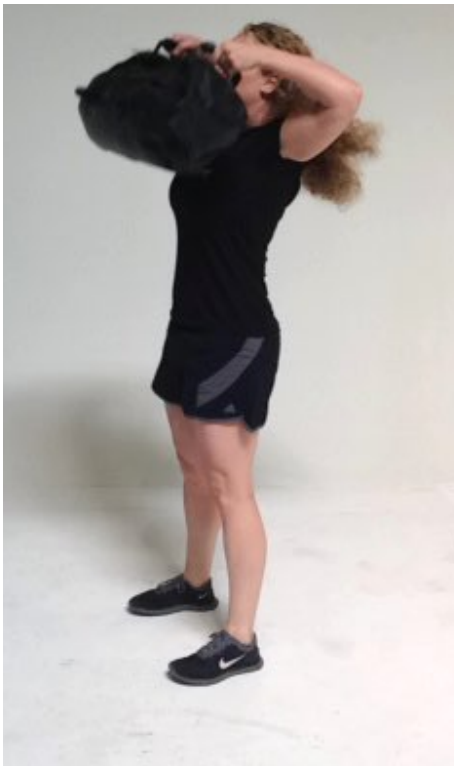
Hip Hinge #5: The High Pull: **Watch the Video HERE**

The High Pull is a simple, yet, a highly effective means in teaching proficiency in the Power Clean. Since some lifters will fear the weight coming up and at them, the High Pull is designed to teach how to make the USB weightless and less fearful. The High Pull must be performed with speed on the acceleration, but not paused at the top position. This does pose a bit of a challenge so the client can decelerate the weight appropriately on the way downwards. Make sure to use the hips to both produce force and decelerate the motion. The elbows and arms are simply directors of the weight and will not produce an upright type of motion.

Make sure to initially pause between repetition of the High Pull to check for proper alignment before large amounts of volume are used. Sound will be a helpful ally to make sure the lifter is properly decelerating the USB from the High Pull. Once proficiency is gained, then using a simple 2:1 or 3:1 combination of High Pulls to Power Cleans will reduce the challenge of learning the Power Clean properly.







Pulling the weight higher on the body usually increases the chances for difficulty learning the Clean to Fists as it is beyond the point of proper weight placement.

Keys in Performance of the High Pull:

- Unless performing a snatch, hold the clean handles and assume a deadlift position.
- Try to explosively "jump" the weight up to chest height.
- The elbows should drive upwards and stay close to the body the entire lift.
- At the top of the pull, the hips should be fully extended and the feet need to be pressing into the ground.
- Do not pause at the top!
- Quickly reverse the motion by leading the hips back into the hinge.
- Keeping the elbows close, "catch" the weight without rounding the upper or lower back.
- Listen for the impact of the USB during the lowering, there should be minimal noise produced on the ground.
- Before next repetition is performed, go through the checklist of the lower back/hips, up per back, and arms before the next repetition.

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Hip Hinge #6: Power Clean to Fists: Watch the Video HERE

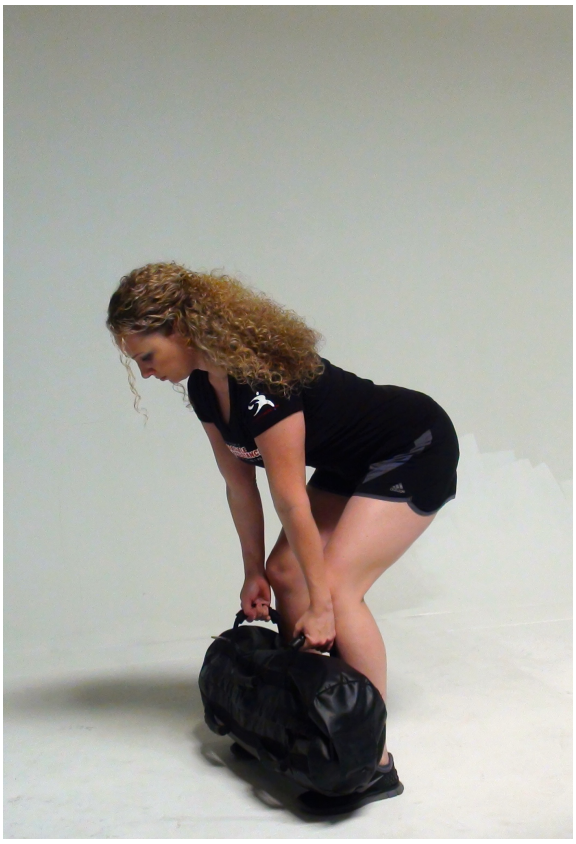
The Power Clean to Fists is an important and powerful drill in DVRT. It is one of the first times that the instability of the USB is going to be highly featured. What does instability help create and teach? Movement Accuracy!! That means brute force is not going to accomplish the goal of this exercise. You must have mobility, stability, strength, and movement proficiency. If you follow the DVRT progressions as they are laid out, it will make learning this great lift far more accessible to more people.

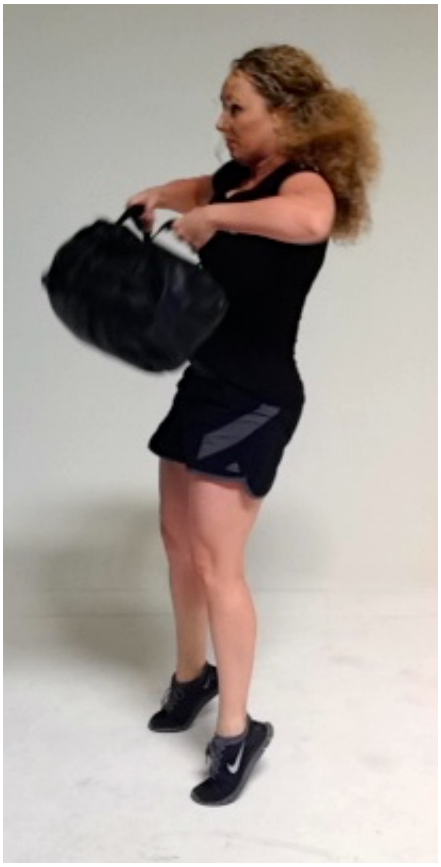
The USB must start as close to the shins as possible, this reduces stress upon the low back. Because the weight of the USB will begin to drop away from the lifters as they begin to pull the weight off the floor it is important to watch for early pulling of the arms.

The movement should involve no arm tension while the lifter creates enough force that the arms can "sweep" under the weight to catch the USB in the crooks on the fists. Failure to create enough force the lifter will find the weight to stall and won't be able to get the arms around the USB. Full extension of the body should occur from deliberately driving high forces into the ground. To reverse the movement the lifter must unwind the body by beginning with a slight chest bump to get the USB moving off the body. The "bump" must not drive the USB too far away from the body, it is just enough to begin the movement of unwinding the body, if the elbows come away from the rib cage the push was too hard.

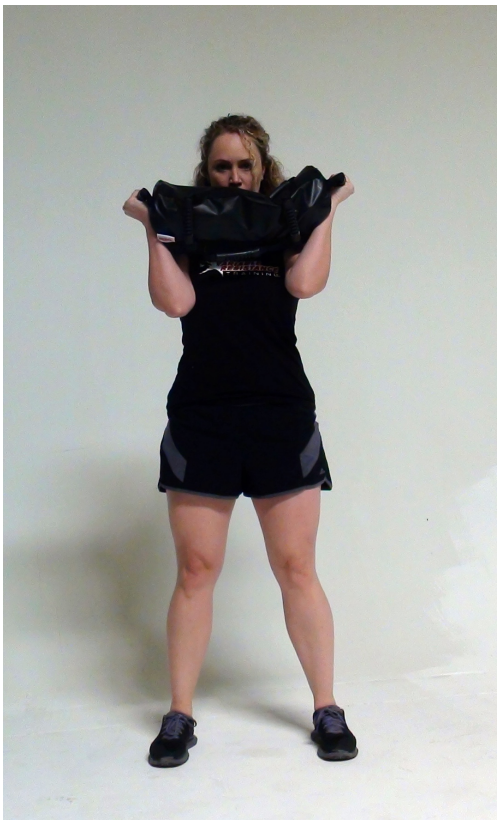
The lifter must absorb the downward momentum by keeping the USB close to the body and quickly dropping the hips back into the original lifting position. Not cueing this rapid downward pull of the body makes the dropping force of the USB very large on the shoulders and lower back.

Catching the USB upon the fists is extremely important for bringing the weight into the correct position to press. Letting the USB roll into the Front Load position will place the client in the wrong posture and will negatively impact not just strength and performance, but place the shoulders at a higher risk of injury.





Catching the USB on the Fists is Proper Positioning for Strength & Burly USBs. This creates both more instability and safety for the shoulder during the press keeping the load close to the shoulder joint.



The Core & Power USBs are generally cleaned from the Outside Handles due to the smaller length which typically coincides with the client's width of shoulders. If a client has their arms too wide while grabbing onto the Outside Handles then they may hold onto the inside clean handles.

Keys in Performance of the Clean to Fists:

- The start of the Clean to Fist is the same as the High Pull.
- Using the principles in the High Pull of making the USB feel weightless, produce enough force to accelerate the USB up the body.
- As soon as the USB reaches its apex, quickly dip underneath and "scoop" the arms under neath to catch upon the fists.
- A proper catch has the hands ending up almost in line with the shoulders.
- To bring down the USB, quickly push the hips back and "unwind" the arms, but never let the elbows come away from the body.

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Alternative to Clean to Fists: Off-Set Clean to Fist-Correctional Clean Movement: Watch Video HERE

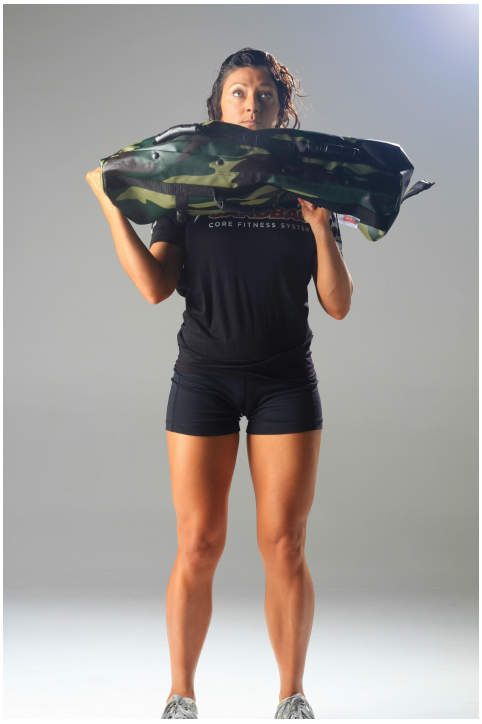
The reality is that there will be those that may struggle with the Clean to Fists. As long as you follow the DVRT progressions Clean to Fists is typically a relatively easy drill to learn, however, being prepared to problem solve provides both the coach and client with an opportunity to maximize training time.

The Off-Set Clean to Fists allows the client to have more control over the USB because the outside hand offers direction and control. The inside hand will still be creating the neural patterns to learn the Clean to Fists and this will allow for a faster transition.

While the Off-Set Clean in this scenario is being used as a correctional exercise, the Off-Set position itself offers many great benefits.

-A Unilateral Clean
-Anti-Rotation & Lateral Flexion
-Creating Tension in the Opposing Part of the Body.
-Great For Those That Are Identified in Having Upper Body Imbalances.

Therefore, the Off-Set Clean can definitely assist in developing the skills necessary in the Clean to Fists, but so much more as well. As key in the DVRT system, you can use the right drills whenever appropriate.



Keys in Performance of the Off-Set Clean:

- Roll in the end flap of the USB so that the hand on the outside grabs onto not just the flap but the side of the USB. This should create a thick grip.
- The other hand should grab onto the clean grip handle and set the body in the Clean to Fist position.
- Upon the catch make sure the USB lands on the fist of the Clean Grip side and the opposing arm simply balances the other side.
- Due to the different position of the handles you may not be able to start the lift from the ground. Make sure the lifter does have proper alignment before having them work from the floor.
- This grip can be an advancement during heavier lifts due to the anti-rotational training or an introduction to the Front Loaded Fist position.
- This can be done with Power and Core Ultimate Sandbags, however, due to their smaller surface area it can be very challenging.

Notes:_____

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Please stop and try the following practice sessions.

High Pull Series

Exercise	Sets	Repetitions	Rest Intervals
High Pull	3	10	take a moment to set-up in between each repetition, this should take 3-4 seconds after set rest 1 min.

Clean to Fists Series

Exercise	Sets	Repetitions	Rest Intervals
High Pull to Clean to Fists	3	2 High Pulls to 1 Clean to Fists 5 times	Rest 1 minute between sets, watch for movement compensations as fatigue accumulates.

Please review the material presented. It is meant to be studied, practiced, and thoughtfully used. Write notes, ask questions, and most importantly break down the ideas into its components to become the best coach possible. Do not simply read the chapter and be done, review, implement, and practice!