

DVRT Restoration: Rotation

The final phase of the DVRT Restoration is working and owning the transverse plane. Up to this point we have spent a lot of time resisting rotational work, now we are going to build to the most powerful pattern of them all. The instability and increased complexity of the transverse plane makes it one of the last qualities we look to build and must first qualify people for first.

Since the transverse plane requires high levels of hip internal rotation we must first screen to see if this quality people actually possess. We can do so by using a simple shin box progression shown below.

One should be able to sit comfortably in the position in the shin box in a tall posture without leaning. Both knees should rest comfortably on the ground and we are looking mostly at the rear leg and the mobility of the hip's internal rotation.



Improving Hip Internal Rotation

If one doesn't already possess great internal hip rotation how can we help start building the pattern? A combination of specific stretches and activation drills can go a long way in helping build the appropriate patterning in internal hip rotation. You will find that many of the drills already covered can assist in building our ability to internally rotate the hip, but we can use the following drills to specifically address such issues.

Pigeon Pose/Shinbox: [Watch HERE](#)

Ground work helps us remove the need for great balance and stability therefore allowing a focus more on simply alignment. While we will use stability as a means of enhancing other movements, with the Pigeon Pose, we can focus on making sure that we are achieving the optimal position. Since this can be perceived as a big stress to the individual, adding in too much instability can cause many compensations.



Our goal with pigeon pose is NOT to necessarily be true to the yoga pose. It is to use this position to both enhance move of the hip as well as evaluate movement issues of the hip. While we are discussing internal hip rotation it may be slightly confusing that we are looking here at external hip rotation. There is good reason in doing so!

The first is that it may be much easier for the individual to get into positions of evaluating external hip rotation than internal. If we force people into position, guarding mechanisms may arise causing us to understand nothing more than the person REALLY doesn't like being in such a position. Some coaches try to over diagnose these situations.

If we see obvious issues in external rotation, chances are that we are likely to see even greater ones in internal. This allows us to look for patterns rather than trying to diagnose complex issues from a singular test or movement. Using such simple strategies too allow us to examine issues from side to side which may be MORE of an issue of the client than just having equal limitations of movement on both sides of the body. There is evidence this is more problematic for low back pain patients (1).

We can use the pigeon pose as a form of assessing the hips as well as a stretch. However, since most of DVRT Restoration we have not spoken specifically about stretching, placing the pigeon pose here as a stretch exclusively may seem odd.

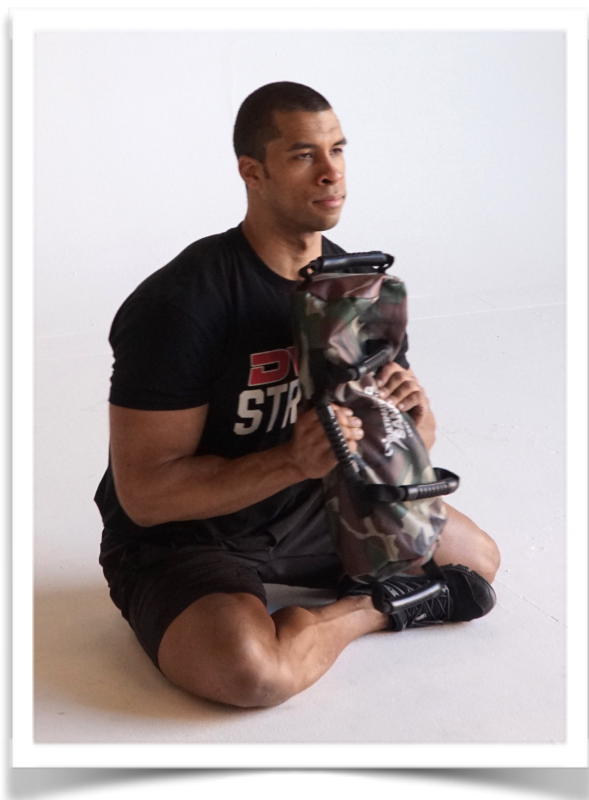
You may guess that we don't perform the pigeon pose JUST as a stretch. Rather, we are going to use specific tension techniques and focus upon the connection of the kinetic chains to enhance improving the movement of the hip. In watching the video, you will see how multi-purposed a rather easy position can be in both allowing us to assess movement and help improve it!

Shinbox Progressions for Fast Internal Hip Improvements: [Watch HERE](#)

Shinbox Press Out: [Watch HERE](#)

We already know that the Press Out variations allow us to really engage the overall core, so why this unique position of the exercise? The Shinbox Press Out helps us teach to have hip extension work with core engagement. Not only is this important for many hip hinging drills, but once again, adding the stability component to this mobility drill goes a long ways in enhancing the impact upon hip mobility.

One of the key ideas that the Shinbox Press Out teaches is that working on specific positions we can use the tension and kinetic chain concepts to improve those ranges of motion. Since the Shinbox allows us to really emphasize internal hip rotation, we can use the DVRT Restoration concepts to improve core stability which in turn, will provide us greater mobility in the hip. The key will ALWAYS be to find what level of these movements one can perform with the LEAST amount of flexion tendencies.



Shinbox Box Around the World: [Watch HERE](#)

We have discussed all throughout this course that our goal is to add small layers that make a big impact. This final version of the Shinbox series allows us to increase core engagement and challenge upper body mobility/stability. We take all elements of good core stability and funnel it into one super charged exercise. When we raise complexity you may have to lower the overall volume rather significantly.



Shinbox Pallof Press with Core Strap: [Watch HERE](#)

In the lifts/chops, we discussed and demonstrated the value of combining movement patterns in creating true functional training movements. Such an idea SHOULD carry over to ALL our training and using the Shinbox provides us an opportunity to work a wide array of not only hip mobility drills, but to progress to stability and strength movements as well!

When we look to address stability and mobility issues in very specific positions we can often see immediate carry over. This is especially true when we are problem solving a movement that most will struggle in obtaining, the shinbox.

Instead of placing the individual in immense discomfort by being in this position, we can try to problem solve their issues by giving them MORE feedback in hope to enhance their movement capabilities much faster. Using the idea of the Pallof Press in the shinbone allows us to address the internal hip rotations needs of the individual by focusing upon greater core activation of the individual. This can be a very useful problem solving strategy for many different clients struggling to gain their movement freedom.



Shinbox Get-up with Press Out: [Watch HERE](#)

The goal of all functional fitness should be to ultimately teach movement efficiency which often relates to making what appears effortless transitions of one pattern to another. When it comes to maximizing both stability and mobility in the hips, the Shinbox Press Out Lunge Complex is unmatched in delivering on it all.

The Press Out is vital in this series as so many of the limitations one experiences in this series is largely a function of core instability and an inability to connect the chain of lats, core, and hips. This drill if worked through the specific progressions as referenced in the past two drills, can go a long ways in unlocking your ability to establish these strong connections.





DVRT Restoration: Creating Rotation

Spending time in building the qualities that will allow us to produce rotation effectively can not be understated. Far too many times, coaches fall in trap of finding a “cool” looking exercise or trying to squeeze an individual into an pre-existing cookie cutter program without acknowledgement of the skills that may have to be developed. The true strength of all our DVRT programs is they are simply designed as maps to your fitness. YOU decide where to start, where you need to go. Providing a strong systemized approach allows you to easily identify and provide the right solutions for your clients.

In training rotation this is especially important as not taking such time to build the qualities of rotation can result in injury. Far too many see rotational training as rotation of the trunk and not the entire body. Sadly, this is EXACTLY one of the primary mechanisms in creating injury in the lumbar spine.

Physical therapist Shirley Sahrmann, states, *"The overall range of lumbar rotation is ...approx 13 degrees. The rotation between each segment from T10 to L5 is 2 degrees. The greatest rotational range is between L5 and S1, which is 5 degrees...The thoracic spine, not the lumbar spine should be the site of greatest amount of rotation of the trunk... when an individual practices rotational exercises, he or she should be instructed to "think about the motion occurring in the area of the chest (2)."*

This should greatly change how we think of the exercises that we use to train rotation. Dead should be the exercises like Russian Twists and any exercise where the client is instructed to keep the pelvis stable and move the torso. Of course we live in the age of the contrarians as well where there will be those that say we have such capacity so we should train it! To that, I would remind you simply of two factors. One, our clients entrust us to be the expert and exchange money under this premise. With THAT comes the need to do our best to “do no harm” to them and their trust.

Secondly, moving under a load is ALWAYS different than our bodies movement through space. I would also remind many coaches that the times we hear or experience ourselves, one picking up something light from the ground (like a pencil for example) and throwing out their backs is NOT from the load of the implement. Rather, it is a function of poor movement mechanics that place the body over its capacity and tolerance.

This makes quite a bit of sense when we really understand the design of the body. As Sahrmann continues, *"During most activities, the primary role of the abdominal muscles is to provide isometric support and limit the degree of rotation of the trunk which, as discussed, is limited in the lumbar spine (2)."* As we have discussed many times, the goal of our training is to teach efficiency and proper movement training NOT just stress muscles! That is why the following is listed as a safe and effective means of teaching proper rotational skills.

What makes transverse plane and overall rotational training so powerful is the force we create by pivoting the foot into the ground. The action of the foot creates a powerful kinetic chain that both produces power and provides us stability.

This same action that is so necessary is also a great challenge for most. Assuming one has good movement capability it doesn't automatically mean one has the proper coordination to perform rotational work. It is important to build this as a pattern just as it has been throughout our DVRT Restoration series.

The Hips During Rotation



Rotational Press Outs: [Watch HERE](#)

Learning to create rotation and optimize the transverse plane means setting forth a series of progressive movements that will reinforce good motor patterns and then slowly begin to challenge the pattern with more complex drills.

The Rotational Press Out is a great start because our torso remains vertical the entire time keeping our spine safe and allowing the client to learn to still brace the torso during this motion. Many will becoming consumed with the act of rotation and lose some of the key qualities that we have taught in other parts of this course, most importantly how to use the core correctly.

The movement of the weight also allows us to focus on the establishing proper footwork. Not only do we want to learn to use the correct foot pivoting action, but how to redirect the force so we learn to become more efficient with the more complex patterns. Rotation is more about efficiency than just brute strength.

Using band resistance we can help teach the difference between leaning and reaching into the rotational movement and creating force from the ground up. We should see the body simply pivot along the movement without change in trunk angle. Once we pattern the Rotational Press Out with band resistance, we can remove the feedback of the band and begin to use the Serape Effect to create real world power.



Rotational Band Press Outs: [Watch HERE](#)



Bear Hug Rotations: [Watch HERE](#)

Even with the best cuing there may be limitations in core strength, coordination, and even upper body health. That is why we can simplify the rotational components even more by using the Bear Hug Rotations. Using the Core Strap and super band we can get the feedback of the Rotational Press Out while using the Bear Hug position to set the foundation of core and lat engagement. It is important to note that holding the weight is not the goal, but HOW we hold the weight.

Make sure that the elbows are being pulled into the ribs and the arms are trying to “break” the Ultimate Sandbag apart. If you do so, you should immediately see the shoulder blades move and the lats become “packed”.



Hay Bailers: [Watch HERE](#)

Working on internal rotation of the hip itself can go along in improving the pattern. Using both the Ultimate Sandbag and an attached band gives feedback to the user during the drill. The position of the Ultimate Sandbag reinforces good postural alignment along with engagement of the lats and core. Meanwhile the band gives lateral resistance forcing the lifter to really drive into the ground and create a strong pivot to resist the pull of the band.

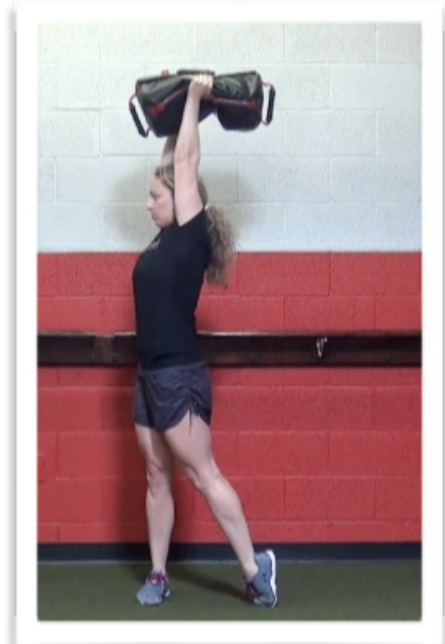
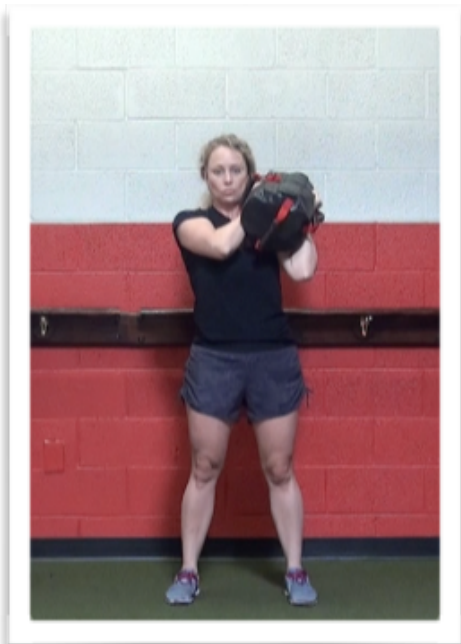
As we add in more joints into the performance of any drill, we increase the complexity of the movement. Not adding load, speed, or volume, but complexity can often be the MOST intense means of progression. That is why whenever possible we want to find mild progressions to building success into more complex exercises and patterns.

Hay Bailers are a great example of how we can teach more complex patterns with feedback and load. Following the direction of the load throughout the drill tells the individual where they need to move into balance and coordinate the movement. The support of the Ultimate Core Strap helps people through the proper arc and if they lose the tension on the strap, they instantly know they have compensated in the movement.

The goal is to move and pivot through both feet to create and absorb force. This takes the chain of lats, core, and hip through a very large range of motion while teaching the individual to create the force from the pivoting action of the feet. Such training can have the added benefit of greater core stability and thoracic mobility.



Rotational Arc Press: [Watch HERE](#)



Once we understand the concepts of rotation and can apply them in a format like the Rotational Press Outs, we can start manipulating the direction of the load to amplify certain aspects of the movement. The Rotational Arc Press Out takes the concepts of the Press Out and brings them more vertical. What does that do? For one, we increase the anti-extension effect of the exercise. That means challenging that plank and ability to maintain core alignment by driving into the ground and bracing the core.

The Arc Press aspect gives us a more forgiving upper body mobility exercise. Since the Arc Press is our one arm vertical pushing exercise, we can work around some of the bilateral mobility that can be hard to achieve not just overhead but in rotation as well. The benefit of doing so also brings about a larger frontal plane component as well. So, again, we are starting to see true three dimensional training.

Rotational Deadlift: [Watch HERE](#)



Rotational Deadlifts are a progression to the Grip Lifts/Chops, therefore, if there are issues in performance of the previous drill then those need to be remedied before moving forward. This is important because we will have greater deceleration loads acting upon the body with Rotational Deadlifts.

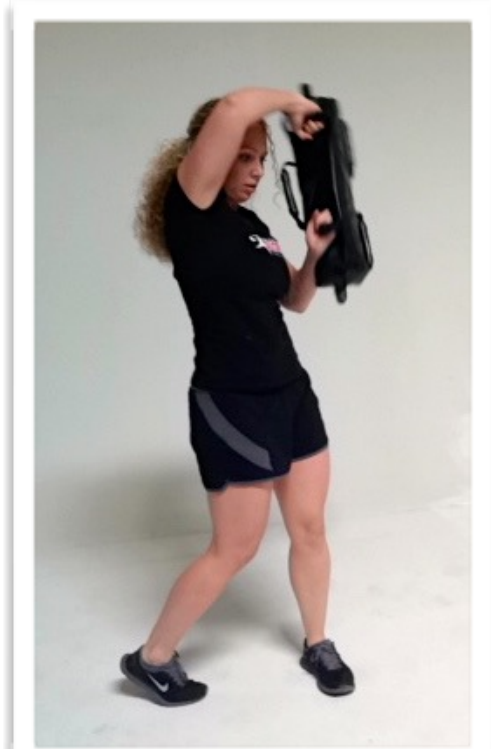
Rotational Deadlifts possess so many great attributes while still working on popular fitness qualities like endurance and power. We have the basis of a kettlebell swing, but in a rotational pattern building not just force, but reactive strength and power. The key with the Rotational Deadlifts is not just the lift and chop that occurs, nor the power, not even just deceleration, but learning how to do so in a cohesive manner to create a fluid motion.

Around the Worlds: [Watch HERE](#)

One of the most unique features of all of the DVRT system is that we can truly build functional strength not just in one plane, one pattern, one direction, but rather in 360 degrees. No other exercise demonstrates this point better than Around the Worlds.

Like most of the DVRT drills presented there are many aspects of Around the Worlds that make them incredibly beneficial. We have the rotational component reinforcing efficiency of movement. There is the mobility of the hips, thoracic spine, and shoulders in play. We have a lift and chop diagonal pattern not just across the body, but around the entire body. Finally, we teach the important “pulse” that experts like Dr. McGill point out that are most important to real core strength.

Prior to performing Around the Worlds one should be cleared not only in the hips, but in the upper body mobility as well. That is why once again progression is so key in achieving long term success!



Rotation Is Life!

It has become a popular saying in that “life happens in the transverse plane”. While it is easy to see why people believe this saying (a lot of the power things we do are rotationally based), we have to know HOW to live in the transverse plane. Hopefully with this module you have found a few key concepts.

Resist Rotation: Learning to resist rotation with many of our lifts/chops and other DVRT drills sets the foundation to learning HOW to rotate. Having a deficit in the ability to resist rotation can lead to issues in progressing the pattern.

Footwork: Knowing WHERE we create rotation from is THE most important aspect of the movement. Far too many people try to perform rotation without knowing the intent or where the motion begins. It is obvious then why so many people get frustrated and sometimes hurt with rotational movements.

Progressions: Obviously something we have tried to hammer home is the idea of building progression. Where you start and where you go with training is far more important than the singular exercises themselves. Having a system, a plan is the key to having long-term success and being able to coach a more diverse number of people.



References

1. Cibulka MT. The treatment of the sacroiliac component to low back pain: a case report. *Phys Ther.* 1992; 72: 917-922.
2. Shirley Sahrmann, *Diagnosis and Treatment of Movement Impairment Syndromes*, Mosby (2001)