

# Coaching Progression of Shot and Disc

By Tom Beckmeyer



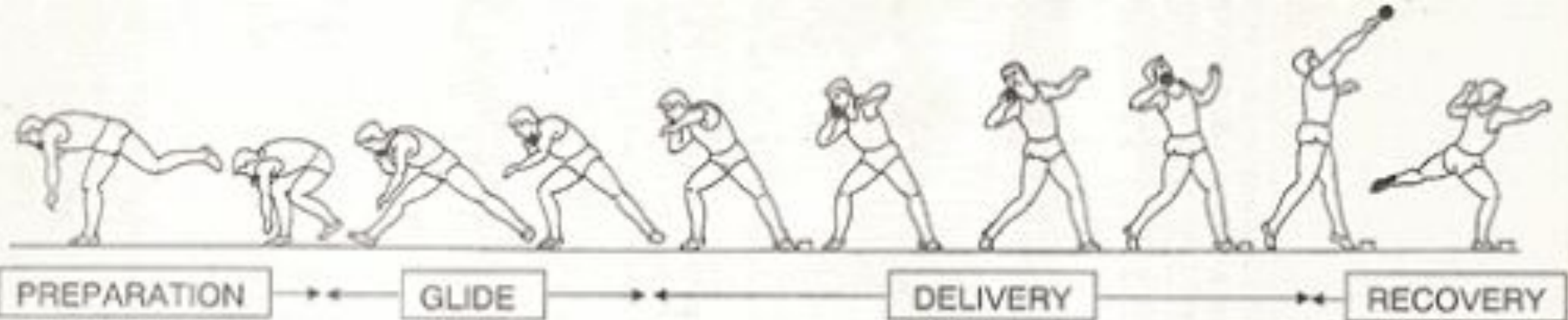
**THROW NATION**

# General Information

- Can do drills with and without implement, without helps Athlete focus on body position.
- Power Side and post side. What that means
- Ques and how they interact with each individual athlete
- Front to back Approach
- Basic Physics approach. Applying as much force as possible to implement during the throw.
- Force = mass x acceleration (Slow to fast What is meant by that)
- Only time we can apply force is when both Feet are on the ground.
- Height of Release
- Stretch reflex in the throw.
- I teach no reverse while teaching technique, to apply as much force into implement as possible.

# Shot Progression: Glide

1. Rack it
2. Load it
3. Step back
4. Quarter Turn
5. Full Turn
6. Suck Under
7. Drop A
8. Full Throws



# Rack It

- shot in hand pushed up above head finding comfortable placement.
- Weight of the shot should be resting on the pad of the hand where the first 3 fingers attach to the palm.
- No part of the shot should be in the middle of the palm (trying to create stretch reflex of the wrist and forearm)
- Fingers should be fairly close together to prevent shot slipping through during delivery.
- Thumb and pinkie are there to stabilize the shot.
- Wrist should be bent at a 90-degree angle.
- Block arm should be up as well and relaxed.
- Shoulders square to the throwing area.
- Feet shoulder width apart.
- Toes facing the direction of the throw.



# Load It

- shot will be lowered into the base of the neck.
- Shot location should be in the soft part of the neck at the bend of the jaw.
- Make sure the palm of the hand is facing the direction of the throw. (que thumb on the clavicle.
- Proper location will allow the thrower to use larger muscle (Pectoral and tricep) to throw shot instead of the shoulder.
- Elbow should be working to get to 90 degrees from the body (some kids can't get it to 90 which is ok we want it to be at 90 at the delivery of throw.)
- Block arm should be at a 42-degree angle. It should hold its position but be relaxed. If it was being held up by a string tied around the wrist. (you can think that this creates an invisible ramp that you want to push the shot up as you throw.)
- Shoulders square to the throwing area.
- feet shoulder width apart.
- Toes facing the direction of the throw.



# Load It Delivery of Implement

- Body will Bow and cause the hips to get in front of the shoulders.
- Block arm motion is like a 1 – arm pull up to the side of the body keeping a strong post shoulder and post side of the body.
- Power arm and power side of the body is delivering the shot.
- Keep power arm elbow up thumb down during delivery.
- At release push with fingers and flick the wrist.
- Power side of the body should chase the shot
- If done correctly the athlete should have to take a step forward with their power leg.
- SHOULD NOT BE FALLING BACKWARDS.



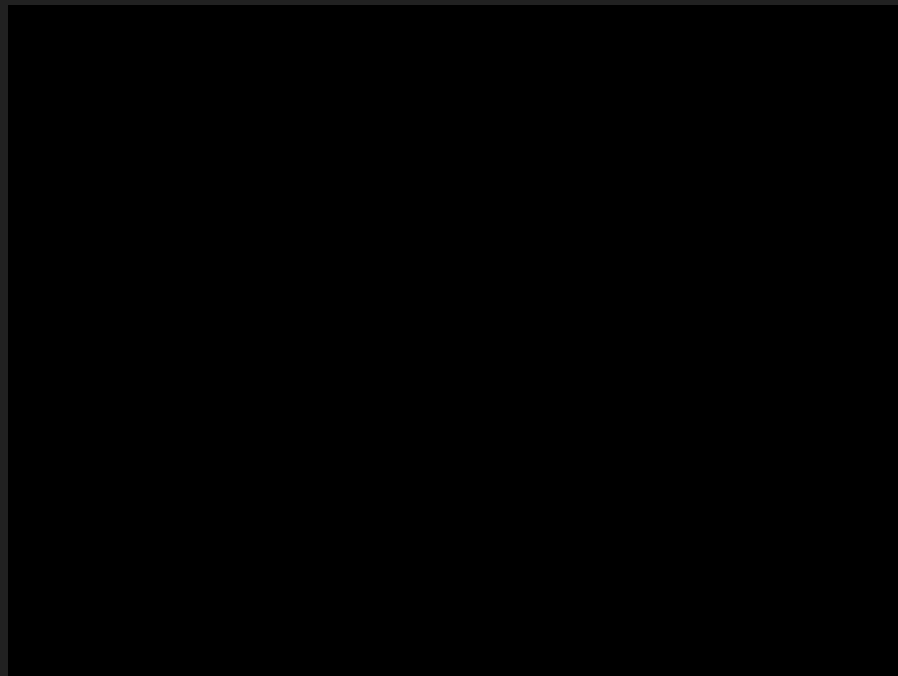
# Step Back

- Power leg steps back and 90 percent of the weight will transfer to this leg and 10 percent on block leg.
- Sit down on the power leg. Like doing a 1 legged hack squat (good z in the knee).
- All the weight on the power leg needs to be on the toe. Heal is off the ground (Athletes should try to get that heel high off the ground as high as possible, it will vary based on the strength of your athlete.)
- Post leg should be able to tap on the ground, to ensure there is enough weight on Power leg.
- Shoulders square to the throwing area.
- feet shoulder width apart.
- Toes facing the direction of the throw.



# Step Back Delivery

- Power leg starts the throw. (applying force first Ground then up)
- Drive hip forward transferring weight to post leg. Simultaneously activating block arm technique.
- Then deliver the shot like Previous Slides.
- Ending weight should be opposite of Starting weight. (90 percent of weight on post leg and 10 percent on power leg.)
- Keep feet on the ground.





# Quarter Turn (X-Position)

- Your power side turned a quarter turn (90 Degrees)
- Weight is still 90 on power and 10 on post.
- Post side is still pointing in the direction of the throw.
- I call this position the X – Position



# Quarter Turn (X-Position) Delivery

- 2 drills I do here.
- 1<sup>st</sup> Have athletes keep body still and just have them turn the power leg in the direction of the throw, this allows them to feel the separation formed by getting the hips out in front of the shoulders.
- The 2nd drill is to do the first drill till the lower body is in the position of the step back and then deliver the shot as we did above.
- Key component here is to get hips out in front of the shoulders.
- Also do these with dumbbells with 25lbs and less depending on the strength of athletes. Also it makes them focus on the mechanics instead of seeing how far they can throw.
- Throwing the Dumbbell also activates the firing chain. It also promotes functional strength.



# Full Turn (Power Position)

- Keep the lower body in the same position as the quarter turn (X) position, turn the upper body another 90 – degrees. Athlete should be looking in the opposite direction of the throw (180 degrees).
- Knee should be over the toe, and the chest should be over the knee of the power side.
- Post arm should be long and relaxed reaching for the back of the ring.
- Eyes \head should be looking straight ahead and not down.
- Shoulders are in the opposite direction of throw.



# Full Turn (Power Position) Delivery

- Lower body power side starts the throw.
- While the power leg is turning, the post arm is swinging open wide to the X – position.
- Key note must keep shoulders back. While post arm is opening to X – position.
- Que (post arm, power leg, keep your chest back.
- Once the athlete gets to the X – position follow mechanics from above.



# Suck Under

- Start in the power position and have the athlete reach out with their power leg.
- Power leg should be balanced on its heel with toe pulled to shin (dorsiflexion).
- Majority of your weight should still be over your power leg.
- This position is hard; you can start with a stance that is a little wider than power and work your way wider and wider as the athlete masters each level.



# Suck Under Delivery

- While keeping the upper body still, have the athlete drive off their heel sucking their power leg underneath their body to the power position.
- Power foot will turn as it is being sucked under and when it lands it will be facing in the same direction as post foot.
- Have them pause to make sure they are in the correct power position. (If the athlete would drop their shot it would land on the ground just behind the power foot.)
- When they land in the power check to see if they have landed on their toe and have good knee bend while keeping 90% of their weight on the power leg.
- Once they have mastered the athlete can do a suck under and continue the action to complete the throw with the same mechanics of above drills.



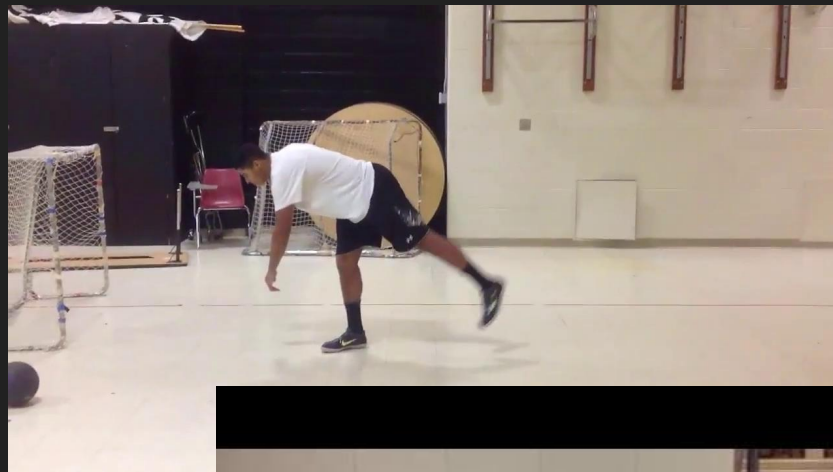
# Drop A

- Athlete will start with the power foot in the middle of the back of the ring with the majority of the weight of the athlete.
- The post leg will be resting on the ground behind the power leg for balance but will not have a load on it.
- Torso needs to be in a comfortable position for the athlete. As long as the athlete hits a good torso position in the middle of the ring. (I prefer a slouched over relaxed position where the post arm is dandling just above the ground.)
- Post leg will lift up, in, and explode out.



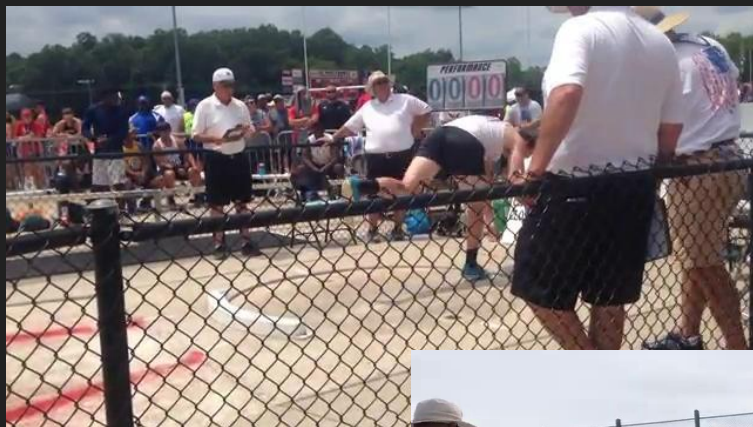
# Drop A Delivery

- Post leg will lift to the T – position balanced on the power leg majority of the weight on power foot/toes.
- Post leg starts to come in while weight is starting to rock (drive) from Power toes to heel. Also the body should start to sit because of this. The knees should touch then....
- The post leg will explode out low to the ground, simultaneously a big drive from the power leg off the heel, While the power foot has dorsiflexion
- Make sure during this movement to the middle that the upper body stays relaxed.
- Post leg reaches for the front of the ring/toe board and should land turned so that the outside if the post leg foot should touch the inside of the toe board
- If an athlete has trouble balancing here, they can extend their arms out to the side when their post





# Full Throw

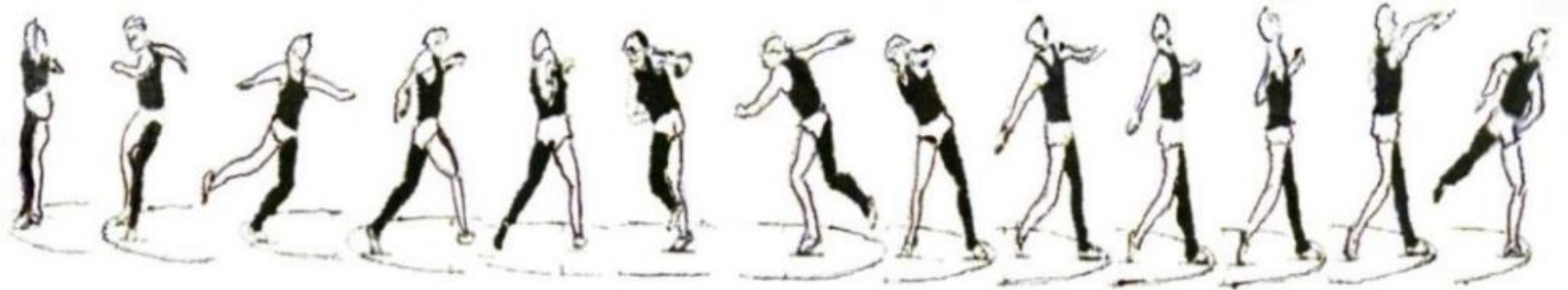


Question ?

# Discus Progression

1. Power Throw
2. Wheel
3. Line
4. Quarter Turn
5. Full Throw

## PHASES OF A THROW



Preparation

Turn Building Momentum

Power Position

Delivery Recovery

# The Grip



# Power Throw

- Keep the lower body in the same position as the quarter turn (X) position and turn the upper body another 90 – degrees. Athlete should be looking in the opposite direction of the throw (180 degrees).
- Knee should be over the toe, and the chest should be over the knee.
- Post arm should be long and relaxed reaching for the back of the ring.
- Disc should be rocking back and forth in a pendulum motion. We want there to be a straight line from the disc to the post hand when the disc is at its highest point.
- Eyes \head should be looking straight ahead and not down.
- Shoulders are in the opposite direction of throw.



# Power Throw Delivery

- Lower body power side starts the throw at the high point of the disc.
- While the power leg is turning, the post arm is swinging open wide to the X – position.
- Key note must keep shoulders back. While post arm is opening to X – position. (Que Shoulder in hip pocket)
- Que (post arm, power leg, keep your chest back.
- The arm with the disc should stay at a 90-degree angle with the body through the throw.
- Discus is released above the eyebrow
- Throwing hand continuing path to the post hip pocket.



# Wheel

- Start in a power throw position facing the direction of the throw. (weight will start out more centered.)
- 2 ways to start
  - Both feet on the ground
  - Rock in to the middle form post to power leg



# Wheel Delivery

- Wind disc and hold in that position.
- The power leg and hip will lead the throw and should be in front of the upper body.
- Squeeze the knees and shoot the post leg to the far sector line and get down quickly while still turning the drive leg.
- Eyes and shoulder should be fighting to stay on the focal point in the back of the ring.
- Once the post leg touches, the athlete should be in the power throw position and refer to above to finish the throw.





# Line

- Athlete start at the back of the ring.
- (quarter turn STOP)
- Weight 90% on post leg.
- Should be on the post leg ball of foot.
- Post leg knee turned in the direction of the throw and should be over the post foot\toe.
- Post arm should be relaxed pointing in the same direction of the knee at the focal point. (down the sector in direction of the throw)



# Line Delivery

- Wind the disc till there is tension in the peck.
- When tension is felt, drive post knee down to the ground pushing forward in the direction of the throw.
- Simultaneously the power side leg is driving to the middle in a sweeping motion with the toe being dorsiflexed stepping under the post arm.
- Power leg sweeping motion should start low and the leg should rise as it comes to the middle (Step up to a three in box in the middle of the ring) This action creates orbit.
- Upper body stays still and relaxed and the lower body is doing all the work.
- This is a critical part of the throw, separation is created here, athlete need to keep separation created with the step under of the post arm through the duration of the throw.
- Once the power toe touches down in the middle of the ring, the knees should start coming together and the wheel is started.
- Continue the throw refer to above to finish the throw.



# Quarter Turn

- Athlete will start in the back of the ring, facing the opposite direction of the throw.
- Weight on post leg to weight on power leg is 80%, 20%, with good knee bend.
- Centerline of the athlete through the middle of their face down through the belly button should be shifted over to the heel of the post leg. Post foot should be up on the toe with heel as high as the athlete can.
- Post arm is at a 90 degrees to body and inside the post leg knee. (unitized post side) post leg and arm are connected and if one moves the other does the same, but the post arm has to stay inside the post kneed during the duration of the throw.



# Quarter Turn Delivery

- With the weight over post leg athlete should wind disc till tension in pec, weight should not shift at all in the legs
- The post leg starts rotating toward the direction of throw. (post heel drives toward the back of the ring while post toe drives around toward the sector with the post knee)
- Post side of the body will open up in the direction of the throw to the first sector line, and stall there.
- Make sure the athlete has a strong post hip as it rotates.
- Power side will paw ground with the ball of the foot, as the post side is starting to decelerate\stall, and you accelerate the power leg in a wide sweeping motion low to high stepping under the stalling left side keeping dorsiflexion of Power ankle.
- Power leg is your motor in the throw and once it starts it shouldn't stop.
- Upper body should stay calm and relaxed.
- Coaching Note: a lot of athletes have trouble in this part of the throw could be balance issues, strength issues, have them start small rotations and work to larger ones. If they do a full 360 degree turn under control with all their weight on their post leg, then they should be able to effectively do the quarter turn.



# Full Throw



Question ?

