ROTATIONAL SHOT PUT

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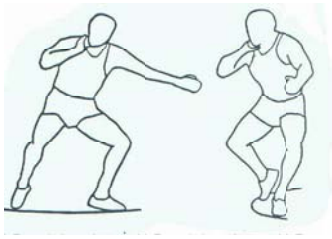
GOALS:
Work the shot over the longest path possible.
Move the shot from slow to fast.
Combine linear speed, rotational speed and vertical lift at the finish.

HOLDING THE SHOT:
Hold the shot at the base of the fingers not in the palm of the hand. If the shot is placed too far down In the hand then a finger push and wrist flip will not occur at the finish. Shot is placed under the ear and near jaw line. The elbow should be up.
Some rotational shot-putters will hold the shot further back and higher on the neck.

STARTING POSTION:
Feet should be shoulder width apart with a quarter squat of the legs. The depth can vary depending on the strength level of the athlete. There should be a slight pike at the waist so that the shoulders are out over the feet.



INITIATE THE TURN:
No big wind-up. Start from a stand still, or have an abbreviated wind-up. Many athletes get into trouble when they get too excited with the preliminary swings.
Move the left arm and left leg together as a system. Do not let the left arm get out ahead of the left leg as this will cause a fall to the middle of the circle. The left knee turns in and down toward the center of the ring.

RIGHT LEG SWEEP:
As tension is created from opening the left leg and arm, then the right leg should get up and moving in a sweeping motion out of the back. The leg should be low and long off the back.

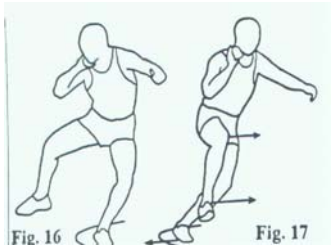


Fig. 16 Fig. 17

LEFT LEG PUNCH:
The left leg provides much of the linear force out of the back of the circle to get the thrower across the ring. This should be a sprint step or "punch" off the back. It should not be a lunge off the back. The difference is the amount of leg extension from the left. I teach the athletes to get off the left leg before the leg gets fully extended. If the left gets fully extended then it is too slow to close in the middle and too slow to get down at the front of the circle, thus loosing time to work the shot.

AIRBORN PHASE:
The thrower must make an effort to close the knees in flight phase. This means, after left leg drives off the back that it must catch up. If left long and dragging behind it will cause a delay and unwinding of the shot in the power position. One of the main goals of the rotational shot putter should be to get both feet on the ground as soon as possible, and if the left leg is slow to get down at the front the thrower will loose power. At the same time there must be patience in the upper body. Many young throwers try to hurry things in the air. They will advance the upper-body and the shot therefore losing the tension created out of the back.

ORBIT OF SHOT:
The shot travels around the thrower in a **circular movement**. The shot should travel through a path that has a low point at the back of the circle and high point at the front of the circle where the putter will be releasing the shot. If the high point is off to one side or the other it will affect where the thrower releases the ball. If the high point is too early then the ball will most likely be thrown down the right sector line. If the high point is late, then the ball will be release down the left sector line.
If the thrower has no high or low point it is considered a flat orbit. This will result in a very flat release.
How can a thrower increase the high and low point resulting in a higher release? If the thrower will

start with a pike or bend at the waist, it will create a low point at the start. This should also result in a higher high point in the middle of the circle. If you refer to the picture below a coach should be able to see the right elbow up and left shoulder down in the low and high orbits. If these two points are in line then the ball should be release down the middle of the sector.

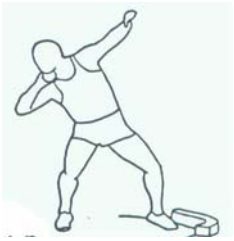
LEFT KNEE PINCH:

After sprinting off the back, the left knee is then pinched to the right knee in air. This shortening of the long left will help to rotate the athlete and make a more efficient path to the front of the ring.
I will literally tell an athlete to bring the left knee in until it makes contact with the right knee.

RIGHT FOOT UNDER KNEE:
The right leg sweeps wide out of the back. As the thrower moves to the middle of the ring the right knee bends and leg shortens which brings the foot under the knee. The knee should stay bent, and the athlete should not step down to the ground but keep the knee bent and let the ground come up to the foot.

LANDING DOWN:
When the thrower keeps the right knee bent and doesn't actively reach with the right foot, the athlete will land down on the right leg. This is very important to orbit and angle of release and being able to lift the shot at the finish.

POWER POSITION:



In the spin technique the foot placement will be narrower in the power position when compared with the glide technique. The right foot will typically land 6-12" past the middle, therefore the left will come down much closer to the right foot. The feet may be as close as 12-16" apart. This is typical.

TURNING THE RIGHT:
When the right foot makes contact in the middle it should be very active. It should touch and begin turning immediately. The right foot and knee will continue to turn which will keep tension on the torso and will later affect the shot.

VERTICAL LIFT:
As the hips come around to the front the legs extend aggressively in a vertical jump. This action along with the angle of release creates the height needed for a long throw. The coach needs to stress a violent leg explosion at the front during release. Make sure that the athlete is not only lifting with the legs but also getting the right hip around to the direction of the throw.

LEFT SIDE BLOCK:
The left leg must extend and the left arm must stop at the left side. If the left leg doesn't extend all the way the thrower will likely foul the throw, lose power or lose lift on the shot. If the putter doesn't stop the left arm then some of the power developed in the turn will escape in the opposite direction of the throw.

REVERSE:

This is the switching of feet in the front of the ring to aid the thrower in staying in the ring. Some rotational shot putters have been known to do a non-reverse at the finish but I feel that they lose the vertical lifting action at the front. I do like using the non-reverse throws for training purposes. The thrower will typically rotate on the right foot to decelerate and save the throw.

FAULTS AND CORRECTIONS

OFF BALANCE AND FALLING TO THE MIDDLE:
CAUSE* Not getting the body's center of mass out over the left foot as the athlete pivots out of the back of the circle.
CORRECTION> Make sure the thrower gets left armpit out around the plain of the left foot in the balance position. Work on 360 degree pivot drills to find this balance position.

LANDING TALL IN THE MIDDLE:
CAUSE* Stepping down with the right leg in the middle, instead of keeping the right foot under the knee and letting the ground come to the foot.
CORRECTION> Make sure the athlete does not reach with lower leg to the middle. The thrower must get left knee down when driving off the back to prevent too much time in the air. The athlete will naturally want to step down if they catch too much air when driving off the back.

NOT TURNING RIGHT FOOT:
CAUSE* Not enough right knee bend in the middle will cause the right foot to stop turning. Why? The thrower must use the right knee as a lever to help turn the foot and the hip. If the leg is too straight, the lever is lost.
CORRECTION> Again, keep the right foot under the knee and land down on the leg.
CAUSE* Thrower does not close the left knee to the right in the air born phase, therefore the left floats slowly around and is late to come down. This will cause a delay or slow turning of the right foot.
CORRECTION> The thrower must aggressively close the left knee to the right, which shortens the left leg. This action creates a more efficient path to the front of the ring, helping the thrower turn faster. This will assist the thrower in keeping the right turning.

FOULING OUT THE FRONT OF THE CIRCLE:
CAUSE* The thrower is not blocking or extending aggressive enough with the left leg**. "Soft left"**
The athlete has too much force and blasts through the soft block at the front and fouls.
CORRECTION> Thrower needs much stronger left extension at the front. Make sure the athlete gets complete extension up through the ball of the left foot.

NO HEIGHT ON THE FINISH:
CAUSE* Not enough vertical lift applied at the finish. Thrower needs to use legs more aggressively driving up into the shot. The orbit could be too flat.
CORRECTION> Thrower should concentrate on applying vertical jump or lift at the front. Increase the high and low points to make a more dramatic orbit. The low point can be more exagerated at the back to create a more extreme high point, setting the thrower up for a higher release angle.

SHORT ARM STRIKE ON THE SHOT:
CAUSE* Pulling head away at the finish which causes release to be shortened.
CORRECTION> The right eye should stay on the shot at release to direct power into the shot. This will help thrower stay in contact with the shot as long as possible out over the board.

NO FINGER PUSH AT FINISH:
CAUSE* The shot is most likely held too low in the pal m of the hand instead of being up more on the fingers. This is called palming the shot.
CORRECTION> Adjust the grip so that the shot is higher up toward the fingers. Most of the weight of the shot should be at the base of the fingers with the thumb under the shot to keep it high on the hand.

TOO ROTATIONAL:
CAUSE* Thrower is not driving off the left out of the back, and possibly turning the head in advance of the rest of the body.
CORRECTION> A more active sprint step off the left driving out of the back of the ring. Have a focal point out in the direction of the throw to keep drive straighter out of the back.