Discus Technique: A Technical Analysis

Sandy Fowler
University of Michigan
Assistant Track & Field Coach

Basic Technique

- Grip
  - Purpose: To provide control over the implement throughout the spin.
  - To provide for a proper release.
  - There are two types of grips used:
    - Spread Finger Grip
      - Place hand on the top of the discus so that the palm covers the center of the discus. This will vary according to the discus thrower's hand size.
      - Place the fingers evenly spread on the rim of the discus so that the discus rests between the last digit and the end of the fingers.
      - Thumb points toward the leading edge of the discus.
    - Fork Grip
      - Discus is held with the index finger and middle finger together with the other two fingers spread comfortably on the discus.
      - The thumb points toward the leading edge of the discus.
      - This grip helps the thrower to release the discus from the index finger.

- Position of Discus
  - Purpose: To hold the discus in a position which will result in maximum velocity and the correct release angle of the discus.
  - The throwing arm is extended away from the body at or close to shoulder level
  - The discus should be kept horizontal (flat) during the spin.

- Starting Position
  - Purpose: To provide the thrower with a solid base of support, so the thrower can move free and easy without any disruption in body balance and alignment.
  - Foot placement is slightly wider than shoulder width.
  - The upper body is kept erect, shoulders are horizontal and kept in line with the hips.
  - Legs should be bent slightly and body weight over the balls of the feet this will maintain balance
Preliminary Winds

Purpose: To relax the thrower, and put the discus in a position behind the hips.

The range of movement or rotation is determined by the amount of flexibility of the individual thrower. The amount of rotation should not affect alignment and body position. The discus is swept to the rear of the circle. One preliminary wind is sufficient (no more than 2)

The Transition (entry)

Purpose: To establish and maintain separation of the upper body and lower body (lower body should be ahead of the upper body).

- To accelerate the speed of the discus in a controlled manner.
- To shift the body weight from the right side to the left side.
- To turn the body in preparation for the drive across the circle.

Begin the turn before the discus has reached its farthest position to the right (off the wind). Body weight should be transferred from over the ball of the right foot to over the ball of the left foot by pivoting on the balls of both feet. The left knee should be turned in the direction the thrower wants to drive. (feel the body weight over the ball toward the big toe of the left foot). This will help decrease over rotation at the back of the circle. Lower body leads while upper body follows. The beginning movement out of the back should be executed in a controlled manner.

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Drive Across The Circle

Purpose: To drive the thrower's body across the circle into the pose position from which the delivery will occur.

From the end of the transition stage the thrower should seek a focal point which will help keep the upper body back behind the hips and legs.

From the position on the ball of the left foot, push down and back with the left leg and drive the body in a linear motion across the circle. The right leg is brought in a swinging motion behind the circle and quickly driven toward the center of the circle. The feet should be kept close to the circle at all times (no jumping).
Leading into the power position

- Purpose: To get both feet in contact with the circle as quickly as possible, to put the thrower in an active delivery position.
- Land in the center of the circle on a flexed right leg. The right foot will rotate counter clockwise until the left foot lands.
- Keep the upper body back to maintain good upper body-lower body separation.
- Keep the body weight back over the right foot.

The Delivery

- Purpose: To transfer the rotational and linear momentum built up by the spin, from the thrower’s body into the discus. The throw is initiated by driving the right knee, while rotating on the ball of the right foot forward and underneath the discus. Body weight is shifted into the left leg.
- When the body weight is between both legs there is an explosive lifting action of both legs as the body weight is shifted into the left leg.
- The left leg works as a post (block) in which the left leg pushes back and down while the right leg is driving up. The left leg is straightened just prior to delivery. The block causes an increase in the speed of the right side as well as an upward motion with the right hip.
- The upper body aids in the blocking action. The left arm is brought out away and the right arm is brought back and kept at shoulder level by the thrower’s side. This should occur simultaneously to the lower body block with the legs.

Power Position

- The “block”
- Drills
Drills

**Blocking Drill**
The throw is initiated by driving the right knee, while rotating on the ball of the right foot forward and underneath the implement. Body weight is shifted over to the left leg. When the body weight is between both legs there is an explosive lifting action of both legs as the body weight is shifted forward into the left leg. The left leg works as a post (block), in which the left leg pushes down and back while the right leg is rotating and driving up. The left leg is straightened just prior to delivery. The block causes an increase in the speed of the right side as well as an upward motion with the right hip.

**Left Arm Drill**
Drill should be performed year round in the power position (standing throw only) in the front of the circle.

- The left arm (non-throwing arm) is straightened and is used to lead the throwing action. Make sure the arm sweeps wide (does not cut across the chest). This will prevent the shoulders from opening early.
- A split second before the release, the left arm is violently flexed into the athlete’s side.

Drills

**South African Drill**
To develop linear drive across the circle, and to work on getting the foot down into the power position quickly. The athlete stands with his/her left foot slightly flexed inside the circle, and the right foot outside the circle (right-handed thrower). The thrower initiates the direction of the throw. The discus is thrown out in front of the athlete toward the direction of the throw. The thrower then spins into the center of the circle by driving off the left foot while driving the right knee and leg forward toward the center of the ring. The thrower lands on the ball of the right foot in the center of the ring. The thrower then pivots or remains on the ball of the right foot until the left foot comes down and the delivery begins. Practice the block with this drill.

- mirror turns and drills: To develop a feel for the whole action. Emphasis is on smoothness and continuity. By having the athlete use mirrors the athlete can see the mistakes they make; they can also visualize the difference when the mistakes are corrected. This helps the athlete to better understand the event.
- Back of Circle Drill: Feet should be shoulder width apart. The athlete then shifts weight situated over the ball of the right foot in the center of the circle. The thrower then pivots or remains on the ball of the right foot until they are toward the direction of the throw. Hip Drill: Should be initiated from the power position. The thrower should have the body weight situated over the ball of the right foot in the center of the circle. The thrower then pushes with the left foot as he pivots on the right foot 180 degrees. When the thrower leaves this drill he can do a lot of 180 degree turns in succession. This drill emphasizes the rotation of the right foot in the center of the circle.

- Practice this drill releasing the discus
- Practice the block with this drill.

Additional Drills

- **Left Side Drill**
- **Hanging Drill**
- **Strength Exercises**
  - Power Snatch
  - Power Clean
  - High Pulls
  - Back Squat
  - Front Squat
  - Jerk
  - Incline Press
  - Dead Lift
  - Bench press
  - Hammering Curl
  - Dumbbell Incline
  - Sit Up/ Crunches
  - Twisting Exercises

Additional items of concern

- Running is also important for throwers, running will increase agility, quickness and coordination.
  - **Sprints** 60-100 Meters
  - **Sprints** 30-50 Meters
- **Plyometrics** Should also be a part of throwers training.
  - One leg Bounds
  - Two leg Bounds
  - Jumps for Height
  - Hurdle Bounds
  - Box Jumps
  - Pit Jumps
  - Depth Jumps
Sandy Fowler

*Assistant Coach Pan Am Games 2011

*Assistant Coach-IAAF World Championship- USA, 1993

*Assistant Coach- Sydney Olympics- USA, 2000

*Head Women’s Coach- IAAF World Championship- USA, 2005

Contact information

*smfowler* @umich.edu

*Phone -734-274-1315 (cell)
734-936-8044 (office)