

## Part 1 Introduction to Rotational Shot Put

# Spin



**N**ot since Dick Fosbury turned the high jump into a “flop” has track and field witnessed as significant a technical advance as the rotational shot put.

The put with a discus-style turn actually pre-dates the flop style high jump, although the question of who invented it remains a mystery. No fewer than four coaches have been credited with its invention in the late 1950s and early 1960s: Toni Nett (Germany), Victor Alexeyev (USSR), Bob Ward (U.S.), and Klement Kerssen Brock (Czechoslovakia).

American John McGrath became the first important exponent of rotational putting when he placed in the AAU championships in the late 60s. He inspired a successful glide specialist named Brian Oldfield to try out the technique. Oldfield's flamboyant showmanship and amazing 75-foot put in 1975 undoubtedly legitimized the event and forced everyone to reconsider their thinking.

The first person to achieve international success with this style was Soviet giant Alexander Barishnikov. He set a world record

(72-21/2) in 1976 and won an Olympic medal (bronze) that year.

These fine performances were quickly followed by others, including Dave Laut (1984 Olympic bronze), Greg Trefralis, and Augie Wolf.

### INNOVATIONS

The tremendous performances of these shot-put pioneers have inspired our current athletes to improve upon their technique. Among the leaders are world-record holder Randy Barnes, two-time world champion John Godina, C.J. Hunter, Kevin Toth, and Brent Noon.

The rotational shot-put technique has evolved to the point where we are now seeing what I consider to be the first generation of rotational specialists, athletes who have spent most of their formative years working on the

rotational rather than glide technique. Their style is different from that of the gliders turned spinners such as Oldfield and Laut.

In the past, the athletes would begin their throw more slowly out of the back of the ring, which caused them to land in a wide-based power position and deliver the shot in linear fashion—just the way it was done in the glide.

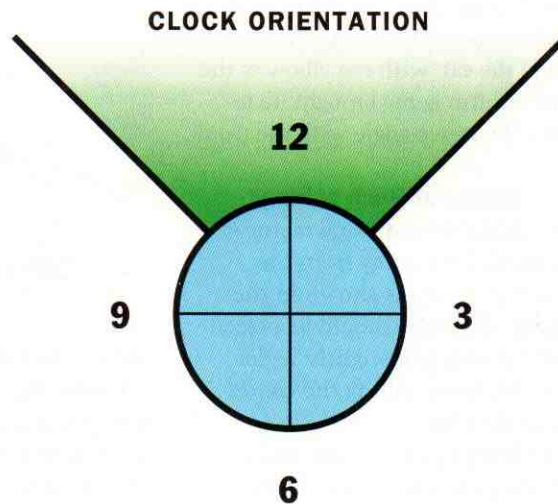
The modern spinners utilize greater speed at the start, which causes them to end up in a very narrow throwing base and allows them to execute a much more explosive vertical delivery action.

This, in my opinion, is the key to the future of shot putting.

by Bryan Rasmussen, Asst. Track Coach, North Idaho College

# to Win

Demonstrated by Brian Oldfield whose 75-foot put in 1975 legitimized the event.



**REFERENCES FOR ABOVE:**

- ▲ Ken Doherty: *Track & Field Omnibook* (4th edition), Tafnews Press, 1985
- ▲ Max Jones: "Thoughts of Art Venegas," *The Thrower*, Dec. 1996
- ▲ Larry Judge: "Shot Treatment With a Spin," *Scholastic Coach*, March 1993
- ▲ Mike Turk: "Building a Technical Model for the Shot Put," *Track Coach*, Fall 1997

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## The Technique

Coaches who are still unfamiliar with the niceties of the rotational technique are invited to explore the following technical suggestions for improvement.

### Grip and Placement of the Shot.

The shot must be rested on the base of the fingers with the thumb placed underneath the ball for support. Many athletes choose to place their fingers closely together in order to apply more pressure to the shot throughout the turns.

Variations include the placement of the shot against the hollow of the neck directly under the ear or pushing the shot against the back of the neck behind the ear, with the elbow of the throwing arm being brought up to form a 90-degree angle with the trunk.

### Stance at Back of Ring.

The athlete should stand facing six o'clock directly away from the throwing sector, as shown in the diagram. The feet should be placed shoulder-width or slightly wider apart, while straddling the center line of the circle.

The body position will tend to vary with the individual. Some putters will choose to stand upright with their knees slightly bent, while others will prefer to shift their torso forward in a one-quarter squat position. All will assume a vertical alignment with the chest over the knees and the knees over the toes.

### The Start.

The big debate is the wind-up start vs the static start. Regardless of which method is used, the key lies in maintaining balance. If the balance at the start is off, the athlete can expect to experience major problems in the throw.

In the wind-up start, the athlete will rotate the right shoulder back to a comfortable position about a

quarter turn to the right, keeping the shoulders level throughout the turn.

Another important key is to keep the right foot flat on the circle while winding up, in order to help the athlete avoid going too far over the right side. This will enable the hips

Photo 1



and c.g. to remain between the legs.

Lastly, the athlete must lock the left foot and arm together in the same direction, with the elbow placed above and slightly inside the knee (see Photo 1).

While the static start is less dynamic, it offers greater balance than the wind-up start. In an attempt to avoid excessive shifting from left to right, there is very little torso rotation. This prevents an early entry, where the head and shoulders cause the athlete to fall to the center.

### The Entry.

The athlete should think of working the hips ahead of the shoulders out of the back of the ring. He begins by shifting his weight over to the left side of the ring, with the left armpit centered over the knee. He thus establishes a rotational axis that features a vertical alignment that is

relatively straight from the left knee through the hip and the shoulder.

It is crucial for the athlete to stop that rotation on the left foot so that he may "sink" onto his left leg in order to keep the weight balanced throughout the turn. The left foot should point to a position directly down the right sector line at about 2 o'clock (see Photo 2).

Meanwhile, the right foot remains grounded until the c.g. has been properly moved left. At that time, the right leg lifts up and moves forward as the foot is kept in close proximity to the ground.

The knees are kept apart during this initial turn as the right leg is swung wide around the axis

Photo 2



established by the left side.

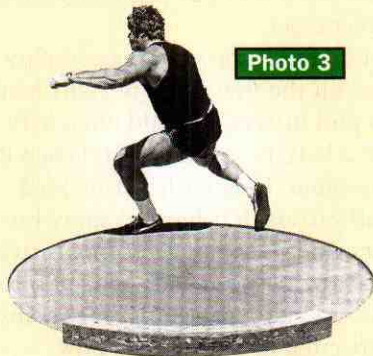
The right side is driven primarily by the right hip and quad, with the shin and foot acting as a lever. The more advanced an athlete becomes, the faster he will be able to sink on the left and move around with the right.

### Linear Drive.

Overall body control must be emphasized as the athlete enters the center of the ring. The separation

between the upper and lower body must be maintained. This will happen if the athlete keeps his shoulders and chest in the direction of the throw just prior to his left leg pushing off the ground (see Photo #3). The push-off serves as a spring movement as the athlete launches into the air.

As the right leg is driven into the center, the hip and knee should form

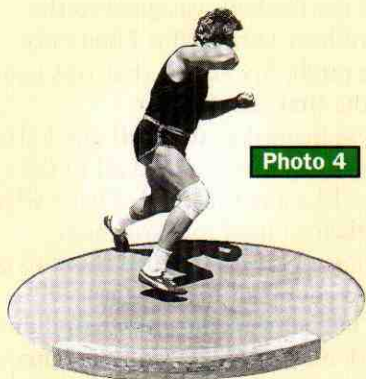


**Photo 3**

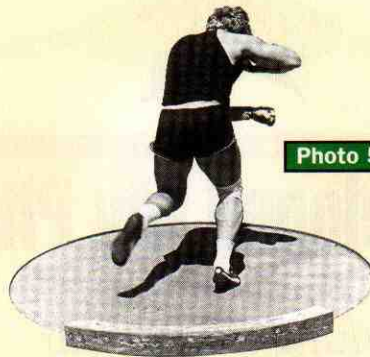
a 90-degree angle, with the foot tucked directly under the knee. Simultaneously, the left knee should begin to move in close proximity to the back of the right knee. The left arm shortens as well, in order to stall the rotation of the upper body.

#### The Transition.

The main purpose of the transition is to get into an effective delivery position. To accomplish this, the right foot has to land early at 9 o'clock (see Photo #4). This will help keep the athlete on balance by allowing him to remain over the right leg in the center of the ring.



**Photo 4**



**Photo 5**

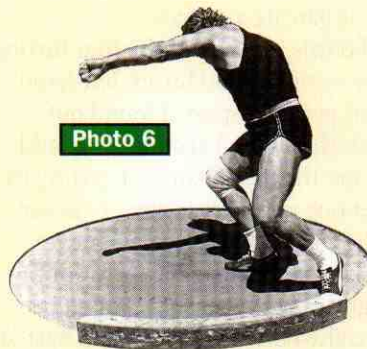
The right foot must be aggressively turned once it touches down.

It is also critical to maintain the "squeeze" in the knees until the left foot is landed. This will help accelerate the movement and place the foot in the power position.

As the left foot grounds, it will be in line with the right in-step. The left shoulder must continue to delay the rotation of the upper body until the left foot grounds (see Photo #5).

#### The Power Position.

The athlete's throwing base is supposed to be narrower than in the glide. In fact, this narrow position is essential for the vertical lifting



**Photo 6**

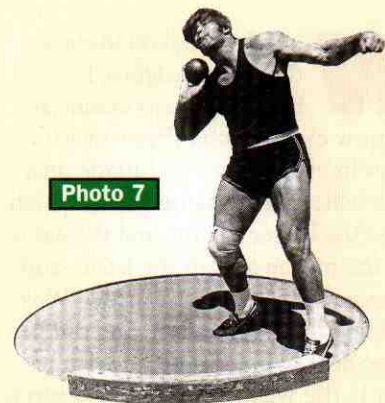
action that is so crucial to success in the rotational style.

While the base is different from the traditional power position, other facets must still be in place. The athlete's weight must remain back over his right leg and the shot must be held in a position of maximum leverage away from the body (see Photo #6).

#### The Delivery.

At this point, the athlete must convert the built-up horizontal speed into vertical lift. This movement can be viewed when the athlete drives around and up with the shot while performing an explosive double leg pivot (see Photo #7). It is different from the glide shot put delivery where you drive the hip horizontally first and then add vertical lift later.

The double leg pivot ends with both feet coming off the ground and the knees becoming fully extended. The upper body action includes the



**Photo 7**

head thrusting back, the chest lifting up, and the left arm sweeping across the body to provide a strong stretch reflex. Finally, the right arm delivers the shot with a vigorous arm strike.

#### The Recovery.

Immediately following the delivery, the right leg must shift to the front (reverse) in order to continue the rotary momentum and check the forward motion. The right foot should land 90 degrees away from the throw, facing 9 o'clock. This stopping action can be further assisted by straightening the left leg and arm toward the rear of the ring in order to help maintain balance.

While reversing, the athlete must never touch the toeboard! This rule prevents both fouling in competition and injuries in practice. ■

#### NEXT MONTH:

*Drills that establish technique.*