The Discus

USATF Level 2 School - Youth Specialization
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Big Circles & Little Circles

- Wind up.
- Turn (Big Circle).
- Non-support phase.
- Wheel (Little Circle).
- Delivery (Big & Little Circles).

The Grip

- First joints of the fingers curl over the rim facilitating a comfortable feeling
- Fingers slightly spread with the first two fingers close together
- Thumb along side the fingers a forty to fifty degrees

The Importance of Rhythm

- Successful throwers are masters of rhythm
- We focus primarily on mechanics but mechanics are dead without rhythm

Importance of the Beginning Movements

All movements through release are effected by the beginning

Starting Position

- The feet positioned slightly wider than shoulder width apart
- Options for initial foot placement
  - Left and right equal distance from centerline
  - Left foot can be lined up on or near centerline
Preliminary Swings

- Rhythmic movement (key) to begin the throw
- For a beginner, a moderate knee bend with an erect back is recommended
- Many coaches advocate only one swing

Wind Up

- Wind up.
  - Right foot flat.
  - Discus high, big stretch.
  - Head and eyes in line with mid point of the body.

Foot Work

- Turn (Big Circle).
  - Weight onto the left leg (70%).
  - Left arm long, arm pit over the left knee.
  - Initiate the turn by turning the left foot.
  - Left foot, knee, shoulder and arm "on the line.
  - Right leg is led by the inside of the thigh or instep.

Three Major Initial Force Producing Moves

- The unseating (as discussed earlier) (linear-extremely important)
- Left leg push-off during the final stages of the unseating (linear important)
- Sweeping right leg (rotary important)

Non-support Phase

- Non-support phase.
  - Drive right knee, get off the left leg (knees together).
  - Left arm wrapped.
  - Keep the discus back.
  - Let the make ground contact with the foot.
Back of the Ring Mechanics

• Body weight is balanced on pivoting and driving left leg
• Left leg bends significantly, lowering the COG = balance and force potential
• Inside of right thigh leads right leg and body to center of circle

Jump Turn

• Left leg push off should result in subtle jump (non-support)
• Posture of upper body as the thrower drives is relatively erect

Discus Orbit (Path)

• At conclusion of last preliminary swing the discus is high
• Discus path from high to low around back of circle
• As thrower drives to center of circle discus rises
• High point to the right of the center line

Linear Sprint-Drive to the Center of Circle

• Body weight is balanced on pivoting and driving left leg
• Left leg bends significantly, lowering the COG = balance and force potential
• Inside of right thigh leads right leg and body to center of circle

Power Position - Right-Left Foot Relationship

• Left foot of center line approximately on line with the instep of the right foot
**Wheel - Little Circle**
- Wheel (Little Circle).
  - Weight on right leg.
  - On the ball of the right foot (heel up), keep it turning.
  - Left foot down early.
  - Keep the left arm wrapped and the discus back.
  - Maximum separation between hip and shoulder axis.
  - No head movement!

**Delivery - Big & Little Circle**
- Delivery - Big & Little Circle.
  - Head Back!
  - Long arm (keep discus away from body).
  - Accelerate the right hip (knee in).
  - Block (left side) & Chase (right side).

**Power Position**
- Foot placement - Heel to toe relationship, shoulder width apart.
- Solid core, long left side.
- Weight "loaded" on the right side (70-30).
- Discus back for a long pull.
- Left arm long and wrapped.

**Discus Orbit - During the Delivery Phase**
- High Point at approximately 1:00
- Low point at approximately 6:00
- Release at approximately 11:30

**Delivery Mechanics**
- Head back.
- Accelerate the right side.
- Block with the left side.
  - Transfers energy.
  - Prevents fouls.
- Flight.
  - Angle of release.
  - Plane of the discus.

**Recovery Phase**
- Upward leg usually results in a reversing of the feet
- Athlete lands on right leg - facing approximately 9 o’clock
The Discus
Teaching Progression

Choose an Appropriate Discus

- A good discus can cost anywhere from $80 to $225
- Rim Weight is the most important factor
- High Rim Weight Discus is for the more advanced thrower
- Lower Rim Weight Discus is easier to control

Getting Started

- Grip.
  - Index finger along the axis of the discus.
  - Index and middle finger together or spread apart.
  - Joint of the first knuckle on the outside edge of the discus.
  - Should be able to hold the discus at your side.

The Grip

Swinging the Arm with Discus for “Feel”

- Swing discus around to feel forces & necessary control
- Should feel that centrifugal force will keep the discus in the hand (confidence)

Teaching the Proper Release

- Bowl the discus along the ground
- Modify the bowling action by having the thrower flip the discus in the air
- The transfer of energy from the body (hand) to the discus is crucial
Discus Bowling

- Drop Drill.
  - Let the discus fall out of the front of the hand.
- Bowling.
- Vertical tosses.
- Skimming.

Release Drills

- Hip Drill
  - No Reverse stand throw
  - Step out (chase) stand throw
  - Stand throw with Reverse
  - Throws with cones, bars, balls

Hip Drill

- Hip drill
- No Reverse stand throw
- Step out (chase) stand throw
- Stand throw with Reverse
- Throws with cones, bars, balls

Standing Throw

- Establish a base about shoulder width
- The relationship of the feet approximates left toe on line with right instep
- Sweep the discus clockwise, down, around the body and back up to an 11 o’clock position

Standing Throw (con’t)

- The right hip is driven up and around pulling the torso with it. The shoulder and arms are thereby brought in to the throwing action
- The left side blocks as the hand releases the discus in the direction of the intended throw
- The left arm generally moves through opposite positions from the right arm
Stand Throw
- Stay back!
- Head back.
- Turning right foot, accelerate the right side.
- Long arm.
- Block and chase.

Position Drill into Stand

Line Drills
- Teaching the Half Turn.
- Turn Drills.
- Modified South African.

Half Turn Drill
- Right foot in the center, left foot in the back (Looks like power position in wrong direction).
- Wind the discus.
- Pivot on the right.
- Step through with the left foot (knees tight) to power position.
- Throw.

Performing the Wheel
- In the wheel drill the athlete places the right foot in the middle of the ring with the left arm facing the direction of the throw and the right arm behind the right hip.
- The athlete then pivots on the right leg grounding the left leg and assuming the power position.
- The athlete repeat this drill in both directions.
Wheel and Throw

Teaching the Turn
• The thrower must assume a good starting position (stance)
• Relate this position to the weight room

Learning To Turn
• Stance – Athletic Position (relaxed).
• Wind up – reach back.
• Load the left.
• Initiate the turn by turning the left foot.
• Lead with the inside of the right thigh.

Turning Drills
• Step around turns (from the middle and in the back).
• 90, 180, 360 degree turns (from the middle and in the back).
• 270 degree turn (Plant the right foot in the middle).
• Line drills (with and without a med ball).

Turning Drills
• Once the athlete is able to make a proper weight shift we teach the turn
• The athlete is taught to shift the weight to the left foot, pick up the right foot and perform 1/4 turn while keeping the shoulders and hips level.
• It may be helpful to tell the athlete to assume that have a book on their head.
• These 1/4 turn movements are continued around the clock.

The 1/4 Turn
The 1/2 Turn

- Once the athlete has mastered the 1/4 turn movement, 1/2 turn movement is learned
- In this drill it is important to maintain shoulder width spacing between the legs as the athlete makes a 180 degree turn

The Full Turn

- The athlete is challenged to make a full 360 degree turn while keeping on balance
- In all of these drills athletes are encouraged to keep their right leg sweeping through a wide arc

360 Degree Turn

1/4 Turn, 1/2 Turn, Wheel

- The first drill is the 1/4 turn
- From the 1/4 turn position the 1/2 turn drill is added
- This will put the athlete in the middle of the ring in position to perform the wheel
- The final drill is the wheel which will get the athlete into the power position
- Repeat 1/4, 1/2, wheel until the athlete is comfortable

Teaching the Sweep

The Giant Step, Wheel

- After the athlete has mastered this combination the 1/4 turn and 1/2 turn is replaced by the “giant step”
- In the giant step the sweeping movement of the start and stops in the middle of the ring
- This combination is Giant Step, Wheel
Full Turn

Specific Strength

Specific Strength

Practice Makes Perfect

- Imitation drills
- 10,000 throws
- Throws with and without a reverse

Riedel
The Glide Shot Put

GLIDE SHOT PUT (Basic Technique)

- The Grip
- Starting Position
- The Glide
- Power Position
- Delivery
- Recovery

The Grip

- The shot should rest on the base of the fingers
- Four fingers on the ball
- Thumb balances shot on fingers

Starting Position (Crouch)

- Right foot at six o’clock
- Free arm closed pointing to the rear
- Shoulders parallel
- Eyes on a spot three to six feet in back of the ring

Position on the Neck

The Glide Shot Put
The Glide

- The movement is a rhythmic whole
- The coach must keep the rhythmic nature in mind when teaching these movements

Glide Technique

The glide is the result of the summation of three distinct movements:

- Unseating
- Left leg action
- Right leg action

Left Leg Action

- The left leg is lifted for a rhythmic beginning
- The left knee is bent and the left leg is brought in toward the right
- As the left knee approaches the right knee the athlete begins unseating

Unseating

This is felt as sitting back or a controlled fall toward the toeboard.

- The COG must pass behind the right heel
- Thrower moves the line of gravity beyond the base of support

Right Leg Action

- As the left knee approaches the right knee the right leg pushes off
- The right leg is fully extended with final contact coming from the heel
- Following full extension the right leg is quickly pulled under the COG

Sequence
Landing

• Weight should be on the ball of the right foot
• The right foot should land approximately in the center of the ring
• The right foot should be turned between forty five to ninety degrees
• The majority of the body weight is back on the right leg

Landing (continued)

• The shoulders are closed
• The eyes remain focused on the original focal point behind the ring
• The left leg should land approximately one inch from the toe board

Power Position

• From this position the delivery phase is initiated
• A good consistent power position is the key to effective throwing
• This position must be rehearsed

Delivery Phase

• There is a violent lifting action with the legs and hips
• The shot stays in line with the elbow
• The key is a long application of force
• The throw is finished by a meaningful snap of the wrist
• The fingers should follow through in an outward motion (thumb down)

Delivery

Recovery

This is termed as the follow through or reverse
Recovery Action
• This is a natural movement that results from the throwers technique
• In the reverse the right leg can shift to the front
• The right foot can brace against the toeboard
• The thrower should not watch the shot in the recovery

Glide Shot Put
Teaching Progression

Holding the Shot Put
• place the shot at the base of the fingers
• the thumb rests on the side of the shot put for control

Glide Shot Put
Teaching Progression

Teaching the Arm Strike
- Probably the most under coached area of the throw

Teaching the Block and Arm Strike

Medicine Ball Puts
• Take a medicine ball holding it with the elbows up and the thumbs down
• Instruct the athlete to throw the medicine ball to a partner
• the hands follow through outward with the thumb down
• This drill will teach the proper follow through in the arm strike

Video: Med Ball Puts
Partner “High Fives”

- Have the athlete face a partner with the throwing hand off of the shoulder
- The left arm is flexed at the midline of the body
- The partner will hold his hand in the air creating a target for the partner
- The athlete strikes the partner’s hand with their throwing hand
- It is important to stress the proper alignment of the arm with thumb down and elbow up

Video: Partner High Fives

Throws on the Knees

- This series of Drills is designed to get the athlete comfortable with the arm strike

Throws on the Knees (Action)

- The shot is off the neck just above the right shoulder
- The left arm is flexed in front of the athlete as they face the landing area
- The athlete puts the shot as described in previous drills

Throws on the Knees (Action)

- When this is mastered add the block by pulling the arm into the body
Throws on the Knees (Action)

• With the block have the athlete turn clockwise to add torque to the movement

Teaching the Power Position

The Stance

• Right toe - left instep relationship feet shoulder width apart
• Be fairly upright at first
• Keep the head up and the midsection firm
• Most of the weight will be on the back leg (right Leg)

Teaching the Lower Body Action

Hip Pop Drill

• Assume the power position
• Turn the knee in on the drive leg toward the direction of the throw
• Keep the shoulders closed and the weight back on the right
• Partner can hold the free arm to help the athlete stay back

Hip Pop Drill

Glide to Hip Pop
Executing the Standing Throw (Lower Body Action)

- Assume the power position
- Throw is started by the right knee turning in the direction of the throw
- Turning of the hip and knee ultimately causes the turning of the foot
- Hips are driven around and up
- Body weight is driven from the right leg over the left leg

Teaching the Movement Across the Ring

The Step Back Drill

- Start in the same position as in the glide
- Perform a short step with the right
- Then step with the left into the power position
- This is a rhythmic movement

Glide Drills

- ‘A’ Drill
- Med Ball Push Drill
- Mini-glide Drill
- Partner glide Drill

The ‘A’ Drill

- Athlete assumes the glide start and unseats
- Majority of weight is on the right heel
- Left Leg extends toward the toeboard
- This extension will create a body position similar to the letter ‘A’.
The Med Ball Push Drill

- Assume the glide start position
- Medicine ball is placed behind left leg
- Left leg is extended back toward the toeboard
- Left leg strikes the medicine ball
- This helps the athlete feel the left leg action

The “Mini-glide” Drill

- Perform a short glide of about 6 inches
- Drill is designed to feel the feet hitting at the same time
- The shortened version is great for ‘weak’ athletes
- As the shortened version feels comfortable, lengthen the glide

Partner Glide

- Assume the glide start position
- Partner holds left arm
- As the glide begins the partner walks with the athlete
- Partner holding the free arm helps the athlete keep the shoulders closed

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The Hammer Throw

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Discussion of Technique

• We will introduce the basic mechanics of hammer throwing and present the teaching progression
• The hammer has maintained an air of mystery over the years because it was limited to the New England area until the 1980’s.
• The hammer throw is actually an easy event to teach and a fun event in which to participate.

Safety

• This is the number one consideration in all throwing events.
• The hammer is a very intimidating event to parents, coaches and administrators.
• Extreme caution should be exercised at all times.
• The hammer should never be thrown without proper supervision.
• Always check and make sure know one is in the sector before throwing.

The Rules

• The hammer circle is the same size as the shot put circle
• The hammer must be thrown from a circle surrounded by a protective cage
• The hammer can hit the cage and still be a legal throw if it lands in the sector
• The hammer can touch the ground inside the ring during the throw as long as the thrower completes the attempt
• The weight of the hammer is the same as the corresponding shot put (ie. women 4k, men 7.26k, h.s. boys 12lb.)
Basic Technique

• Grip
• Stance
• Winds
• Turns (Single Support)
• Turns (Double Support)
• Work Phase
• Counter
• Orbit
• Release

The Start

• Grip
• Stance
• Winds

Grip

The right handed athlete grips the handle with the left hand at mid-finger.
The palm of the right hand is placed over the left with the fingers closed over the left.
A leather glove with open fingers is worn on the left hand to protect the fingers.

Hammer Throw Coaching

Geometric Reference Points

Starting Position

Stance

Feet are shoulder width apart with slight knee bend.
Hammer is placed behind near right foot.
Turn the right shoulder with the arms straight and grip the hammer.
The vertical and horizontal lines mark the

The Winds

The winds are designed to set the hammer in motion and setup the rhythm of the throw.
Two winds are commonly performed in the hammer.
In teaching the winds it is best to use a medicine ball on a rope.
The Winds

Sweep hammer across front, looking slightly right of the ball. Do not let hands pass the midline of body.
As ball passes in front of body, curl left arm and form a window in front of the body.
Legs are fairly rigid during winds with body weight shifting opposite the ball.
As hammer sweeps across, up and around the left, legs and hips must not sway to right or drop.
Do not try to reach back overhead. Arms form a window in front of the body.
As hammer sweeps around to the back, hands clear top center of head by a few inches.

Winds continued

Twist right shoulder and torso to catch the implement behind.
As right elbow draws back, left upper arm brushes in close to face and chest.
In wind 2 sweep hammer through its low point with both arms fully extended before hammer reaches 0 degrees.

Winds continued

Plane of hammer must reach well to the left as hammer orbits around.
As hands clear the top of head, they must now be to the left of the top of thrower’s head, extending the sweeping radius and pull of the hammer.

Setting up the Low Point

- Hammer trajectory during the winds
- Low point first wind
- Low point second wind
- Low point entry

The Turns

This is how the hammer thrower travels across the ring and creates acceleration of the hammer.
The thrower, the hammer and its rising orbit move in relaxed rhythm as a unified system.
The action of the left foot is heel-side-toe while the right pushes off of the ball of the foot.
The left leg remains bent throughout.

Turning Action - Video
Entry into the Turns

On entry into turn 1, Stroke the hammer faster from the high point of wind 2 with the shoulders turned less to the right than on wind 1 in order to assure that the low point hits 0 degrees.

Drop from an erect to a bent knee position as hammer drops from 180 degrees.

Relax the shoulders and arms in this smooth, sweeping motion.

The Turns

Single Support Phase

Stroke hammer well out and around rotating left foot. Counter pull of hammer with hips. Relax arms and shoulders. Right foot pushes off at about 90 degrees.

Let hammer feel as if it’s leading the system of thrower and hammer around to 180.

Keep both feet rotating in unison, knees bent. Keep chin raised and line of vision in line with and above hammer. Drive right foot up over left ankle, keep knees closely together.

Rotating speed of left foot and quickness of right foot landing reduces throw’s single support phase and give hip axis a slight lead over shoulder axis for stroking hammer in power phase.

Double Support Work Phase

As right foot lands, drop to bent left knee for the catch. Feel torque between hip and shoulder axis.

On landing, right foot should be facing 270 degrees. Immediately rotate both feet. Keep line of vision bisecting triangle formed by two straight arms.

This is where the hammer is most accelerated.

Counter the pull of ball by shifting left and back against it.

As gravity accelerates ball downward to 0 degrees, the rotating action of feet, hips, arms and torso in the work phase adds to acceleration of ball out and around body.

At 0 degrees sit back against opposite pull of hammer with relaxed arms.

Turns continued

As right foot lands, drop to bent left leg and to the right of the center point of the hammer’s orbit (Note the vertical line in image). The line of vision remains above and ideally slightly behind the hammer.

The orbit of the hammer steepens throughout the throw.

The low point of the orbit should occur at 0 degrees. Keep the line of vision bisecting the triangle of the arms without looking down at the hammer.

Work Phase

- This is where the hammer is accelerated.
- The work phase occurs between 270 degrees and 90 degrees.
- The hammer is worked with the lower body.
The Counter

Orbits

- This represents the trajectory of the hammer.
- The orbit begins relatively flat in the winds and steepens throughout the throw.
- The low point of the orbit should occur in front of the athlete or at 0 degrees.
- The highpoint of the orbit should occur behind the athlete or at 180 degrees.

Orbit

Release

The release is the culmination of an accelerating orbit, resulting from 3 technically the same, though faster, work phases with both legs driving up and a blocking action at the end.

At moment of release face 90 degrees blocking on left leg, head and shoulders way back, line a vision straight up.

Release follow-through

Release continues with both feet rotating into follow-through around another quarter turn with head way back and hands high.

Arms and hands finish high. Regain balance in the center of the throw.

The Release
The Full Technique

Teaching Progression for the Hammer Throw

- Turns
- Winds
- Release
- Turning Drills
- Wind Drills
- Release Drills

The Turns

- This is how the hammer thrower creates force and travels across the ring.
- The action of the left foot is heel-side-toe while the right pushes off of the ball of the foot.
- The left leg remains bent throughout the turns.
- Most advanced throwers perform a 3 or 4 turn throw.

Turning Action - Video

Using a stick, an aluminum bat, or a broom, the coach demonstrates slowly, in segmented moves, a series of 3 or more technically correct, complete 360 degree turns on the heel of the left foot and ball of the right foot with knees tightly together and the right foot lifting over the left ankle to touch down at the completion of each turn.

Then the thrower will learn one turn in segments until he masters the positions to be able to complete one correct heel-toe turn, followed by a series of heel-toe turns.

Teaching the Turn in Segments

Draw with chalk a bisecting line from 0 to 180 degrees and a series of lines about 6" apart on an angular arc behind the thrower.

Grip a bat or bar like a golf club and stand straddling the line with back to throwing area.

Keep head erect and learn to turn without looking down at feet or the ground. The bat should be extended from straight arms out to the right side a little below knee height.

Turning on left heel and ball of right foot, push the bat around past 0 degrees to 90 degrees at about shoulder level.
As bat is pushed to 90 degrees, step with right foot to a spot three inches in front of turned left foot. Completing this step will bring body weight from left heel down on the ball of left foot. In a progression of identical 6-inch longer right foot steps, complete a full 360 degree heel toe turn. In completing each of these stepping segments of a full turn, keep knees bent and closely together. In the steps from 180 degrees to completion of the turn, step over left ankle, and stay balanced primarily on rotating left foot and bent left leg.

One Complete Turn
From preliminary stance, turning on heel of left foot and ball of right foot, push the broom past 0 degrees until facing 90 degrees. At this point lift right leg and continue to turn on the side of left foot, letting the broom lead the system as it rises to 180 degrees at head height. The right leg is kept close to left with knees almost touching. The left leg continues to turn on the ball of the foot with the right leg stepping over the left ankle for a touch down on the ball of the right foot facing 270 degrees.

The Position Drills
Teaching the Turn Progression
• The turn can be taught in three parts
  • Position 1-Turn to 90 degrees
  • Position 2-Step to 270 degrees
  • Position 3-Pivot back to 0 degrees

Starting Position
• Base slightly wider than shoulder width
• Assume a quarter squat position
• Form triangle in front of the body with weight evenly distributed
• Eyes to the horizon and the chin is up

Teaching the Turns (Step One)
• Have the thrower assume a quarter squat position with both arms out.
• Have the thrower put his weight on the left heel and the ball of the right foot.
  – Turn on the left heel until the athlete is facing 180 degrees.
• Have the athlete pick up the right and turn and walk a couple of steps.

Teaching the Turns (Step Two)
• Assuming the preliminary stance, again turn on the left heel until the athlete is facing 90 degrees. This is position 1.
• At this point in the throw the athlete lifts the right leg and continues to turn on the side of the left foot.
• The right leg is kept close to the left with the knees almost touching.
Position 1
- Right handed thrower makes a quarter turn to the left
- Pivot on the ball of the right foot and the heel of the dorsiflexed left foot
- The majority of the weight is on the right leg
- Arms form a 90 degree angle from the body
- The eyes are to the horizon

Position 2
- The left leg will rotate on the side of foot to the ball of the foot
- The right leg will step over the left with tight shins and knees
- The right leg will step 2-4 inches behind the left foot
- The majority of the body weight is on the left leg
- The hips will be facing 270 degrees and the upper body should be facing 225 degrees

Position 3
- The athlete will pivot on the ball of the feet until the weight is back on the left heel
- The hips will move forward and the shoulders and chin will move away from the ball
- The weight will be evenly distributed and the core will be firm

Full Position Drill Video

The walk-around drill with turns and release:
On cement slab, grip hammer as at start of winds.
With knees slightly bent, shoulders relaxed, and both arms straight, begin to walk in place in a circle on balls of close together feet.
The hammer, trailing behind, rolls over the surface inscribing a circle.
By completion of one revolution, the hammer will take off the ground like a rising airplane.

The walk-around drill continued:
With long straight relaxed arms, erect head, and line of vision over top of the hammer, increase walking speed on balls of feet, rotating torso in place in circles, keeping flight of hammer low and flat.
Hips, shoulders and head should be aligned with hammer. No dragging hammer behind.
Turning faster, feel increasing pull of hammer. Turn as a total system.
Counter against pull by straightening back and bending knees.
Beginning with 3 or 4 walk-arounds add series of heel-toe turns and correct release.
Teaching the Winds

• Sweep-Curl-Form the Window-Twist.
  – The thrower sweeps the ball in front of him, curls the left arm when the ball passes in front of the body, and then twists the right shoulder and torso to catch the implement behind him.
  – The arms form a window in front of the body.
  – The thrower should look slightly right of the ball.

The Winds (Continued)

– The legs are fairly rigid during the winds with the body weight shifting opposite the ball.
– The shoulders and arms are relaxed in this smooth, sweeping motion.
– In teaching the winds it is best to use a medicine ball on a rope.
– The thrower should not let the hands pass the midline of the body and should not try to reach back overhead.

Winds

• Have the athlete 5-10 perform multiple winds.
• Wind right and left handed for shoulder flexibility.
• Winds can also be performed with one arm.

Training Drills for the Beginner

• To be successful in the hammer a number of drills with different weight/length implements need to be performed.
• A shortened version of the hammer is sometimes easier to control for the beginner.

Wind and Release

• Have the athlete perform two winds and deliver the implement into the landing area.
• For this drill the orbit of the winds should be fairly steep.
• Think of releasing around the right leg for the right handed thrower.
• Stress the blocking action of the deliver
1 Wind 1 Turn Drill
- Have the athlete perform a wind followed by a turn followed by another wind and a turn.
- This warm-up drill is great for balance, core strength and working on the entry into the turn.
- 3-5 sets are an ideal warm-up.

1 Wind 2 Turn Drill
- Have the athlete perform a wind followed by two turns followed by another wind and two turns.
- This warm-up drill is great for balance, core strength and working on the entry into the turn.
- 3-5 sets are an ideal warm-up.

2 Winds-1-Turn and Release
- Have the athlete perform two winds, a turn and deliver the implement into the landing area.
- This drill helps the athlete perfect the release with the turn providing a little momentum.
- Remember to wind a little steeper in this drill.
- Think of releasing around the right

2 Winds-2-Turns and Release
- Have the athlete perform two winds, two turns and deliver the implement into the landing area.
- This drill is actually an excellent way for the beginner to throw in competition.
**The Javelin Throw**

**Basic Technique**
- Grip
- Carry
- Approach Run
- Withdrawal
- Pre-Throwing Stride (Cross Steps)
- Throwing Action

**The Grip**
- Three Basic Types
  - Finnish
  - Fork
  - American
- The grip is relaxed to lessen the tension in the arm and the shoulders

**Finnish Grip**
- The most popular grip
- Javelin is held horizontally across the palm of the hand
- Index finger is rolled around the javelin above the binding
- Second finger is wrapped behind the binding of the javelin
- Other fingers are wrapped around the binding
**Fork Grip**

- Javelin is held horizontally across the palm of the hand
- Javelin rests between the index finger and the second finger
- The other fingers are wrapped around the binding

**American Grip**

- Javelin is held horizontally across the palm of the hand
- Index finger is wrapped around behind the binding of the javelin
- The other fingers are wrapped around the binding
Basic Technique

Video: Javelin

Carry

- Javelin is held horizontally with the palm up in an over the shoulder position above the head
- Point of the javelin is usually level but this can vary

Approach Run

- Athlete is in an erect position at a check mark on the runway taking initial steps similar to the approach of a jumper
- Athlete builds acceleration while running to a second check mark on the runway
- Approach run can vary from 6 to 12 strides
- Beginner starts with fewer strides
Approach Run

Withdrawal

• As the thrower hits his check mark with the left foot the thrower takes the javelin backward
• Extend the throwing arm backwards keeping the palm up and keeping the implement aligned with the shoulder
• Run away from the implement
• This is referred to as the transition phase
• Point of the javelin is near the head

Withdrawal

Pre-Throwing Stride (Cross Steps)

• Following the withdrawal the thrower will begin the step pattern of the javelin
• As the thrower completes the withdrawal, they will be on the right leg
• The hip position is variable based on the flexibility of the athlete
  – For orientation in feeling torque we will say the hips will face the right side and the javelin will face the throwing direction

Cross Steps

Performing the Pre-throwing Stride

• In a rhythmic manner, the legs move out ahead of the hips with the right leg stepping in front of the left leg
• There is a tilted axis
• The right leg is picked up high similar to a triple jump bound
Performing the Pre-throwing Stride (con’t)

• Upon touching the ground the right leg will bend, as in a ‘soft step’ to allow the COG to continue moving
• The left leg should swing through prior to the right leg touchdown
• Starting with the left count each step: 1–2–3–4–5
  – the space between the final two steps is smaller as this is the plant

Cross Steps

Cross Steps Video

The Plant

Power Position

• The power position of the javelin differs slightly from the shot put and discus
• The right leg faces the throwing direction at 45 degrees
• The left leg is extended landing heel first with a slight flex

Power Position
“C” Position

- Initiating the throw
- The arm action
- The release

Bow Tension

- As the COG passes over the right foot there is push/rotation with the right foot
- The right leg drive precedes a firm planting of the left leg

Throwing Action

- Initiating the throw
- The arm action
- The release

Initiating the Throw

- As the COG passes over the right foot there is push/rotation with the right foot
- The right leg drive precedes a firm planting of the left leg

Initiating the Throw

Arm Action

- The palm is up as the elbow comes through high over the shoulder line
- The throwing shoulder is like a whip handle
- The release occurs near the front, as high as possible
Arm Action

Release

- The release angle is approximately 27-35 degrees
- The throwing hand rotates right after the release achieving a thumb down position
- Avoid the ‘baseball follow through’

Full Technique

Teaching Progressions for the Javelin Throw

- Grip
- Arm Action
- Power Position
- 3 and 5 Step Throws
- Walk-in Throws
- Full Approach
Teaching Progressions for the Javelin Throw

• Grip
• Arm Action
• Power Position
• 3 and 5 Step Throws
• Walk-in Throws
• Full Approach

Teaching the Grip

• The javelin should rest across the palm
• The javelin should be held like a wet bar of soap
• Experiment with the different grips by walking the field
• Remember the Finnish grip is preferred

Teaching the Arm Action

• Have the athlete take the implement overhead and throw into the ground about 3 to 5 feet in front of the athlete
• Keep the throws short emphasizing pulling through the point of the implement

Teaching the Arm Action (con’t)

• As the athlete progresses draw the javelin back and perform short throws of 10 to 15 feet into the ground
• Stress keeping the elbow high and following through over the head

Stabs
Video: Short throws

Teaching the Power Position

• Assume the power position with the right leg at 45 degrees facing the direction of the throw
• The javelin is drawn back with the palm up, the head facing the front and the hips and shoulders to the side

The Standing Throw

• Keeping the weight on the right, initiate the action by slightly lifting the left leg
• Drive the right leg by pivoting on the ball of the foot and then block the left foot
• The hips will rotate to the front with the shoulder, arm and hand to follow

Standing Throw

Three Step Throws

• Start with the right leg crossed over the left, with the javelin drawn back and with most of the weight on the left foot
• Starting with the left, the foot pattern is left-right-left
• This short approach throw helps emphasize the plant and the power position

Video: 3 Step
Five Step Throws

- Start with right leg crossed over the left, with the javelin drawn back and with most of the weight on the left foot
- Starting with the left, the foot pattern is left-right-left-right-left or 1--2--3--4--5
- This is the best way to teach pre-throwing strides

Video: 5 Step

Walk-in Throws

- With the implement drawn back the athlete performs walking cross over steps to a check point
- At the check point the athlete accelerates into a five step throw

Walk-in Throws

Full Throws

Training Drills

- The javelin thrower is like a baseball pitcher - REST is essential
- Training drills are the dominant part of the training program
- Athletes should only throw 2 to 3 times per week
Medicine Balls (General)
• These drills are designed to increase shoulder and torso flexibility and strength
• Examples:
  • overhead throws
  • seated side throws
  • v-up throw
  • fish out of water

Medicine Ball

Medicine Balls (Specific)
• These drills are preformed with the medicine ball held in both hands overhead and can be done against a wall or net
• Examples:
  • Standing Throws
  • 3 step Throws
  • 5 step Throws
  5 to 10 repetitions at first then increase

Weighted Balls
• Keep four pounds and under
• Watch technique (avoid side arm)

Exercises with the Javelin
• Hip pops with partner holding the tail of the javelin
• Flexibility drills with the javelin
• Examples
  • Dislocates
  • rotator cuff flexibility, twisting

Flexibility with Javelin
Running Drills

- Javelin carries
  - perform 30m accelerations carrying the javelin
- Withdrawal drill
  - perform 40m accelerations carrying and withdrawing the javelin
- Crossover Drill
  - 30m crossovers with javelin withdrawn
  - Pay attention to the lower body action and keeping the throwing arm long

Javelin Pully Drill Rt Hand

Javelin Pully Left Hand

Full Technique

http://communities.msn.com/thethrows
- Live Chat
- Message Board
- Download Video's
- And much much more!
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