TOM PETRANOFF

JUST THROW IT!

THROWING ZONE ATHLETICS LEAGUE

FOLLOW UP TO TOM PETRANOFF'S THROWING CLINIC
MARCH 14, 2020

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PRINCIPLES

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CONDITIONING/FITNESS ZONE
TAAT Test access adjust train.

MEDICINE BALLS
The core zone and foundation of throwing

STRETCH REFLEX
The bump zone involuntary reaction to forces applied

PLYOMETRICS
The explosion zone from ground up

SPEED AND AGILITY
The coordination zone

FLEXIBILITY
The 'gumby' zone to stay loose and limber

INJURY PREVENTION
Weak side training is key to success and balance of muscles

MENTAL PREPARATION
Mental zone is finding your anchor and 'just throw it'.

WEIGHT TRAINING
The power zone is important to world class athletes

COMPONENTS

COMPONENTS OF THE JAVELIN THROW

- The Grip: American grip, Finland grip, Fork grip
- How to carry javelin over CG
- The aiming of point at target in throwing area
- The draw back slow perfect angle
- The opposite side arm position
- The armpits are up and loose
- No elbow in use on throwing side relaxed
- The throwing arm loose and above shoulders
- The block and chase after throw and keep momentum
- The Release will happen naturally

DRILLS & WARM UP

DRILLS & WARM UP

- Target Throwing with Turbojavelins or real javelins ...weak side too!
- Developing Motion Skills with two handed throws Turbobal
- Warm up with Running jumping and throwing easy Standing throw for disabled or wheel chair
- Three Step Throw count left step only if throwing from the right
- Mix in weak side and two handed warm up
- Overhead Underhand Two handed forward·
- Short easy 30 meters runs multi directional 10 in total
- 10 squats per set
- 10 lunges per set
- Arm circles and arm whips x 20 multi directional
- Skipping & High Knees sets
- Cartwheels try to do 4-6 in a row jumps in all directions
- Hip, body, trunk rotation, side leans
- Accelerations x 2

“The warm up is essential in preparing the athlete for a successful practice and preventing injury in an extremely dynamic event. The warm up can also be an effective tool to add additional core development work and running form work. If you are sweaty you are not ready!”

SETUP & STATION 1

GROUP SETUP & STATION 1

GROUP SETUP

Five groups with 20 minutes station sessions & rotate

STATION 1: TURBOJAV

Turbo throwing is an essential part of any season javelin training. It is a great way to introduce new concepts to throwers because the implement is much more forgiving the shoulder and elbow joints when mistakes are made.

Standing, Forward Throws.

Low effort forward throws to teach the athlete to throw over their center of gravity and propel the implement using body whip rather than arm strength.

3 step (one left), 5 step (one left), 7 step (one left)

Weak Side, Strong Side

Training both weak and strong side is an important part of developing a balanced athlete who remains injury free. Weak side improvements will always transfer to the strong side.

Target Throwing

Helps develop the low trajectory of a good throw (29-32 degrees). Throws that land left or right of the target give good feedback regarding misdirected rotational energy.

STATION 2

STATION 2: MEDBALL DRILLS & SKILLS

Medball throwing is a great way to help reinforce throwing over the center of gravity while eliminating rotation in the shoulders. Medball training is also a great way to improve javelin throwing strength. All drills can be performed with one or two hands.

Standing Warm Up

3 step (pone left), 5 step (one left), 7 step (one left)

Wall Repeat Sets

An essential way to get in thousands of low intensity reps that reinforce throwing over the center of gravity and stretch reflex. In addition, in exercising the specific strength wall sets require stabilizing shoulder muscles that are strengthened to prevent injury.

- Two-handed overhead
- One-hand overhead
- Rainbow two-handed underhand
- Over the back

STATION 3

STATION 3: JAVELIN SPECIFIC

Grip

Draw Backs

The shoulder should remain parallel to direction of the throw. The javelin should remain parallel to the ground and the javelin tip should remain next to the athlete´s temple.

Drills

Target: Drawbacks, walking track backs, jogging track backs, weighted draw backs, hose drags

Left Arm Block: Make sure the left arm blocks high and with the elbow tight to the rib cage. Make sure there is no rotation in the shoulders.

Pullies: Weighted left arm drills

Delivery

Each athlete will have various nuances with their delivery mechanics based on unique structural characteristics and flexibility. Although there is no one right way to deliver the javelin, It MUST be released over the center of gravity to prevent injury and maximize performance.

Drills

The Nick drill, the pole drill, bungie pulls

STATION 3

STATION 3

Impulse Step

The purpose of the impulse step is to transfer the momentum and energy from the approach into the block leg and create a stretch reflex. An effective Impulse step will also allow the right leg to hold while the left leg gets down faster and get the momentum into the hip whip and throw. Versus “soft step”.

Drills

Left Leg Block: The left leg should block straight or nearly straight and remain straight throughout the delivery phase. It is crucial for the athlete to maintain speed into the block. The momentum should be entering from behind the block not on top of the block. Keep the feet facing forward. Do not turn feet to right or you will lose point and momentum.

Posture

Poor posture during any phase of the throw will make performing all other technical elements difficult if not impossible and can lead to injury. Stay tall and be bouncy and 'whippy'. Loose and aggressive. Your shoulders and arms must be relaxed and no tension on throwing side and blocking side is the action and create the block. The key to opening the gate of stretch reflex.

STATION 4

STATION 4: WEIGHT PLATE/GYMNASTICS

Gymnastic and other core strength drills are a great way to train young athletes outside of the weight room. Developing dynamic strength in multiple dimensions is key to successful and injury free javelin throwing.

Drills

Gymnastic

- Wall Feet Walks
- Wall Hand Walks
- Push Up Circles
- V-Walk
- V-Walk Bounce
- Crab Walk
- Handstand (against wall)
- Handstand Push Ups
- Handstand Walk
- Wrestlers Bridge
- Wrestler Bridge Push
- Wrestler Bridge to Stand

Weight Plate

- Plate Swing
- Plate Chop
- Plate Reach Back
- Plate Halos
- Plate Twist

STATIONS 5 & 6

STATION 5: PLYOMETRICS

Multi jump training will develop explosive athleticism that is essential for long throws. The intensity of plyometrics is measured by the amount upon impact and can be affected by many factors including the height of the jump, the athlete's strength and the athletes posture upon landing. The intensity of a plyometric workout should be adjusted for the training and skill level of each athlete to prevent injury.

Drills

- Burpees, Rocket Jump
- Standing Broad Jump
- Standing 2-Foot Triple Jump
- Skips
- Bounds
- Box Jumps

STATION 6: TURBO SPIER

Drills

- Transfer of Energy
- Accelerating Into the Block
- Power Position
- Long and Strong Pull
- Patience, Relaxation

STATIONS 7 & 8

STATION 7: RUNNING TECHNIQUE

Biomechanically efficient running technique is key to hitting technically proficient positions in the cross overs and delivery on a consistent basis. Poor running mechanics promote poor posture in the final phases of the throw that can lead to injury.

Drills

- Skips
- Acceleration
- Max Velocity
- Running Over Hurdles
- Running With Javelin

STATION 8:MENTAL TRAINING

Drills

- Get Mentally Prepared to Compete
- Watch Videos of Thrower that Resembles Your Style

STATION 9

STATION 9: RUN UP

Acceleration

Determine how your athlete will accelerate out of the back (upright or drive acceleration). A full upright running posture must be achieved before the transition.

Drills

- Sprints
- Straight Leg Bouncing
- Ankle & Knee-Overs
- High Knees
- Skips for Height & Distance
- Run Drawbacks

Transition

Make sure the athlete maintains good posture, transitions the hip all the way through, and draws back smoothly into the correct position consistently. A right-handed thrower should transition on the right foot.

Drills

- 2 Step Transitions (walking & jogging)

STATION 9: RUN UP

Cross Overs

The three goals during the cross overs:

1. Maintain Speed
2. Maintain Control (body & javelin)
3. Set up the Block

Maintain speed by maintaining good posture, running with light steps and increasing footfall frequency.

Maintain control by staying relaxed and preparing your body with special strength conditioning.

Set up the block by maintaining posture, crossing over with the feet close to the ground and by staying relaxed.

<u>Drills</u>

- Running Drawbacks
- Weighted Run Throughs
- Uphill Run Throughs
- Hose Drags

STATION 9

STATION 9

Determining Number of Steps

The number of cross over steps should not exceed 7 with 5 being optimal for most athletes. The number in the acceleration phase will be determined by the type of acceleration used (upright or drive and the speed the athlete is able to handle at any given time. Determine the natural number of steps by doing numerous run throughs with and without throwing but without a toe board early in the season. Watch for trends within each athlete.

Most athletes will trend to a consistent number of steps which will be your starting point when you move to the runway. If the athlete does not show a trend additional work will be needed on phase mechanics. Develop a consistent approach length by using a check mark at the cross over step and at the left food block.

Rhythm

Rhythm is the key to a consistent throwing. An athlete´s rhythm must be the same through all drills and throws although tempo can change. The rhythm of a javelin throw is unique in that the rhythm of acceleration phase is different from any of the cross overs.

<u>Drills</u>

- Gallop Throws
- Cross Overs (over cones)