

Throwing Zone Athletics  
JAVELIN CLINIC 2018

with Tom Petranoff

Welcome to our clinic. Our mission is to educate, motivate and most of all have fun learning the javelin event for all ages, all abilities. Javelin is one of the most demanding and challenging events not only from track and field but in sports in general. The javelin throw requires a lot of skills, drills, flexibility and technical understanding to execute the throw. You need to be fast, explosive, elastic, and have an overall fitness level that is very well-balanced.

Tom had a twenty-year successful track and field career that included two world records, Olympic Games, World, African and Pan-American Championships as well as competed in 517 top track meets around the world. Tom found a need to teach the javelin event to youth that would enable kids from all ages to learn about javelin and throwing in a fun, safe and easy way. Over the past three decades we have sold over a million of Turbojavs all around the world. We have been helping young athletes to develop not only their skills, but to have tons of fun during the process. Turbojavs are a great tool to improve throwing in general; it does not matter if you are a baseball pitcher, a quarterback, or a javelin thrower. Learning the right mechanics will enable you to perform better.

## TRAINING PRINCIPLES

**KISS:** Keep it simple stupid. Tom started out with the basics at nineteen years old, then stuck to the basics his whole career. Many drills were invented along the way, but if you lost the basics, you lost your throwing zone. You have to stick to the basics and build it brick by brick. Beginners should train 2-3 times a week for months and let the body get used to it. You need time to get the body use to training and add more as you get physically fit. It takes time to do any sport well and javelin is tough if you don't have basics down like clockwork. You must keep the fundamentals of training as your center, focus and build your anchor around it. The javelin event is a run, jump, and throw event! You must do lots of running, jumping, and throwing, together in training your mind and body to get in sync.

You must do your drills so many times it becomes auto pilot. You don't have to think, you just let go, and let the throw happen. Repeat, and repeat with quality repetitions over and over, until you are sick of it and then do another 10,000. In Tom's twenty years of training he did the same medball drills over and over two million times. Sledge hammer drills the same, over two million. How many have you done? Not to mention 517 competitions including masters meets in his forties. It's like any sport, you must get the reps and core strength so fine-tuned and perfect, it can't break no matter what stress you throw at it. I lost my focus a few times and lost my basics. Lost the Zone! It happens. Get over it quickly, or it will eat you alive. If you are not enjoying your sport, not getting better, and most of all not loving what you are doing, forget it and move on. Javelin throwing looks simple to most people, but throwing a spear without serious training can be very dangerous to your body parts. Tom says he can relate the javelin throw to the golf swing in many ways. You must generate power and accuracy by letting the feet get torque from the ground, up to the legs, up to the hips, up to the shoulder and arms that guide the stroke and club head speed to the golf ball.

## **Training for the Javelin**

Conditioning/fitness zone    test access adjust train.  
Medicine Balls            is 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 of the Javelin Throw**

The Grips for throwing  
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 to warm up team**

Target Throwing with Turbojavelins or real javelins. Weak side too  
Developing Motion Skills with two handed throws Turboball  
Warm up with Running jumping and throwing easy  
Standing throw for disabled or wheel chair  
Two Step Throw count left step only—right handed throwers  
Three Step Throw count left step only -right  
Four Step Throw count left step only  
Mix in weak side and two handed warm ups  
Overhead Underhand Two handed forward

“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!

Mix these drills up dudes!!!!!!!  
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 sets  
High Knees sets  
Karaoke sets  
Cartwheels try to do 4-6 in a row get the head dizzy  
180/270.360s jumps in both directions

Hip, body, trunk rotation, side leans  
Accelerations x 2

### **5 groups with 20 minute sessions and rotate**

#### **Station 1, Turbojav**

Turbothrowing 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. Weakside improvements will always transfer to the strong side

Target throwing

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

#### **Station 2, Medball drills and 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 only, 3 step (one left), 5 step (one left), 7 step (one left)

#### **Wall repeat sets**

Are 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 hand overhead

One hand overhead

rainbow Two hand underhand

Over the back

#### **Station 3, Javelin specific drills and skills**

- Grip

American grip, Finland grip, fork 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 (eye)

Drills: target drawbacks, walking drack backs, jogging drack 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.

Drills: 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, bungee pulls

- Impulse step

The purpose of the Impulse step is to transfer the momentum and energy from the approach to transfer into the left leg block leg and create the bump or 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. The soft step is not correct as it teaches the right knee must drop immediately upon contact with ground. Soft step delays the throwers momentum and delays the rotation of the right hip as the left leg will drift pass the CG and fail.

- 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 loose 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, Weight plate, gymnastic station (bend don't break).**

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

Wall feet walks, wall hand walks

Push up circles

V-Walk, V-Walk bounce, Crab Walk

Handstand against wall, handstand push-ups, handstand walk

Plate swing, plate chop, plate reach back, plate halos, plate twist

Wrestlers bridge, wrestler bridge push, wrestler bridge to stand

#### **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 of force 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

Burpees, rocket jump  
Standing broad jump  
Standing 2-foot triple jump  
Skips  
Bounds  
Box jumps

### **Station 6, turbo spier, advanced throwing concepts**

Transfer of energy  
Accelerating into the block  
Power position  
Long and strong pull  
Patience, relaxation

### **Station 7, running technique and drills**

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

Skips  
Acceleration  
Max velocity  
Running over hurdles  
Running with the javelin

### **Station 8, Mental training**

Get mentally prepared to compete with your MOJO, find the zone!

### **Station 9, Run up drills and skills**

- Acceleration phase: 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: sprint drills, straight leg bouncing, ankle and knee overs, high knees, skips for height and 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 transition drills while walking and jogging.

- Cross overs: the three goals during the cross overs are: maintain speed, maintain control of your body and javelin, 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.

Drills: run draw backs, weighted run thoughts, uphill run thoughts, hose drags

- Determining the 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 thoughts 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 foot 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.

Drills: gallop throws, cross overs over cones