

Tom Petranoff

# **TURBOJAV**

## **Skills & Drills**

Free Manual

Technique

Fundamentals

Exercise

Games

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# Tom Petranoff

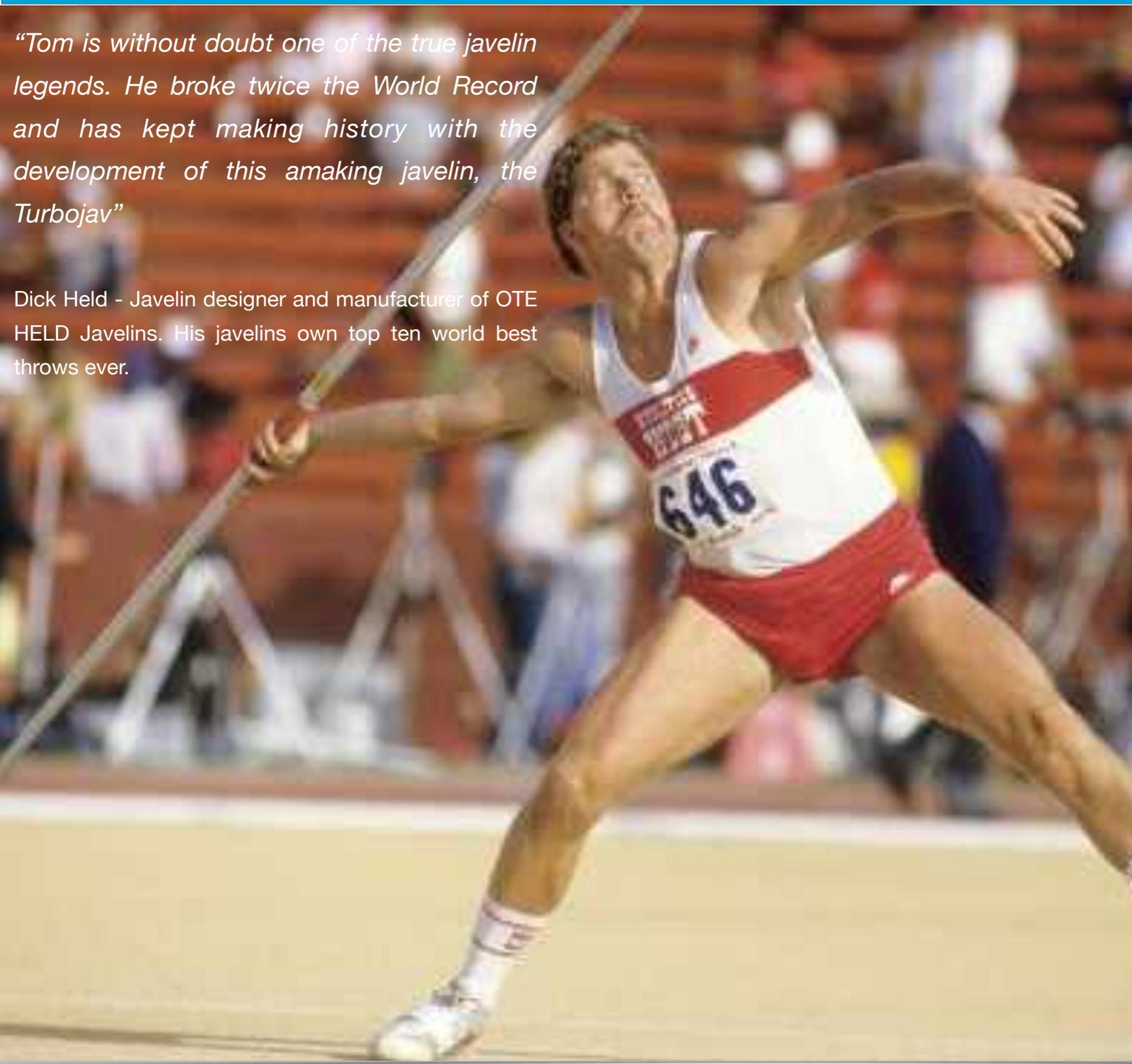
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## Tom Petranoff

*“Tom is without doubt one of the true javelin legends. He broke twice the World Record and has kept making history with the development of this amazing javelin, the Turbojav”*

Dick Held - Javelin designer and manufacturer of OTE HELD Javelins. His javelins own top ten world best throws ever.



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.

# Tom Petranoff

**KISS:** Keep it simple stupid. Tom started out with the basics at nineteen years old, then stuck to the basics his whole career. Sure 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 use 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! So 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. Its 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.

The same chain reaction happens in javelin. The block and ground create the whip from ground to hips and the chest and body reacts to the stretch reflex to the shoulder/ arm that is created by the torque. The shoulder is torque converter and most people think it is elbow and that means Tommy John surgery in many cases. There is no elbow use. It will bend a bit naturally to transfer energy. If you think of a bow and arrow, the bow does not move much when you pull back arrow. You do not see energy as it is short big stroke of energy that accelerates arrow. The C position is the bow at plant and you can t see the bump of energy in real time. You can slow it down and see how stretch reflex bump hits and its linear energy that Tom could feel and knew it was a long throw. This is hard to find and it is found in the basic and fundamentals over and over.

Most javelin throwers use a run up with run, draw back, and throw over 20-30 meters. Tom's run up was 86 feet or 26 meters and draw back was at 14 meters or 45 feet. Tom used 14 steps and two follow through steps to stop momentum. He broke it down into four left foot to draw back and four more to the plant and two steps to stop or 10-12 feet to toe board. He did this run up 20-30 times a day 3-4 days a week. Walking it in slow motion to full run speed, Tom's momentum only accelerated on the runway. He always ran through he block, and chased out after javelin when thrown. 20%, 30%, 40%, 50%, and 60% build it up, feeling the bounding run build into a scissors like leg drive that ends in the block and left side action that creates the bump and pull. You can't do enough of these! Tom used his left side count as his focus to the block, and 1 left, 2 left, 3 left, 4 draw back, and attack the block. Some throwers use no drawback like Uwe Hohn or 5 and 3 was popular run up. There are many ways to run up and deliver the javelin, what works best for you. How many reps can you get in to get the feel. It starts in the thousands and 10,000 run throughs you will be good, 50,000 you will be pro. You are training to run, jump, and throw. Keep that in mind whenever you train. Heavy weights are only for top shelf level and restricts flexibility to throw. Get good at the basics and get the form first. Then build it brick by brick.

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# Turbojav

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## Key terminology



Turbojav 300-400 G

### Center of Gravity:

The center of gravity is the location in directly under the body core where your balance, power, leverage and speed can be optimized if you use its levers and chain reaction of stretch reflex from the ground up. You must learn how to keep the center of gravity in check with the movement of the body, head, arms, and legs through the process of running, jumping, and throwing or any other activity.

### Foot Placement:

Placement of the feet for the Turbojav, as well as the javelin should be shoulder width apart and long stride to develop the pull. By placing the feet in this position, holding the implement directly over one's center of gravity, and alignment of javelin is aimed at a target. This will allow all levers used in throwing the implement to be properly thrown over the center of gravity with accuracy and pulling action. The blocking action and pull is created by the left side action.

### Drawback:

The process by which a thrower moves a Turbojav or javelin from a "carrying" position to a position whereby the implement is "drawn back" in preparation for the throw. The javelin must be kept very still, level to ground and the point facing forward at target your aiming at. It must be smooth and relaxed. This must be done many times to master. Tom did 20-30 a day 3-4 days a week. You must master the run and drawback to get to the block whip.

# Key terminology

## Leverage blocking action:

It is important to have a thrower balanced to “apply force” and “leverage” over his/her “center of gravity”. The center of gravity of a thrower should not change when the thrower runs draws back and throws. The most important is to gain momentum as you build speed and slowly draw back and use non throwing side to block and create the whip and stretch reflex to shoulder.

When these levers work together and the control of body positioning in the process of carrying, drawback, and release, the thrower will experience his/ her best performances. Plus it will prevent injuries.

## Over Shoulder Throwing Motion:

Over the shoulder throwing is the process of bringing the Turbojav or Javelin over the shoulder in order to throw. By bringing the implement over the shoulder instead of around the body, the center of gravity never leaves the center of his/her body.

By keeping the center of gravity underneath the thrower instead of out to the side, the thrower will experience more accurate and more powerful throws with less stress on the elbow

and shoulder joints. By throwing out away from the body, the arm is susceptible to injuries and is not using the body’s leverage system and the large powerful muscles in the chest and shoulder.

## Throwing through the Point:

A common fault of any thrower in any sport is to think that throwing is a pushing motion, or rotational. With the Turbojav and the javelin, this is maybe clearer than any other implement. Javelins are elongated, or long and slender, implements.

The level carry and drawback are imperative to long, accurate, and safe throws. When someone “throws through the point” they are “pulling”, not pushing the tail of the implement through where the point was only fractions of seconds earlier. By throwing the tail through the point, one is optimizing the flight pattern of the implement.



# The Grip



There are three ways to hold the javelin. It is important that you feel comfortable and have a good grip as it will allow you to transmit the force into the javelin.

**Grip Nr.1:** Index Finger Grip. In this grip, the index finger grips right around the edge of the cord. The thumb and index finger are on the edge of the cord. Must be opposite to the index finger as well and the other fingers simply wrap softly onto the cord. This is the most popular grip to begin with because of comfort and simplicity. This is a great grip for beginner throwers and elite.



**Grip Nr. 2:** The Middle Finger Grip is also popular grip in javelin throwing. If you place the javelin in your hand, you will notice that the javelin comfortably sits in the groove of your hand and that middle finger naturally lands on the cord edge. Many throwers enjoy the feel of the middle finger grip including the world record holder Tom Petranoff so you can't go wrong with this grip.



**Grip Nr. 3:** The Fork Grip. We do not recommend this grip because it is hard to master. Not many thrower use it as it is hard to control javelin. With this grip, the thrower places the javelin between their index finger and middle finger very deep into knuckles. It is not very balanced grip. This grip is sometimes used by beginner and intermediate throwers and typically phases out of use as throwers begin to throw further. Tom used the middle finger grip with old rules javelin. Then when new rules came out in 1986 he switched to fork grip as he threw it further with new grip. Try them all. Pick the one that feels best and gets you good flights.

# Standing, One, Three, Five Step, Full Approach

## Standing Throw:

With your feet flat on the ground, face in the direction of the throw. The Turbojav should be held at eye level, parallel to the ground, with the point facing forward. Your non throwing arm should also be pointing out in the direction of the throw. Draw the



Turbojav back being careful not to bend the throwing arm and also not allowing the nose of the Turbojav to rise up or fall down. Keep the Turbojav trajectory always over the throwing shoulder, as it will help you to throw clean and through the point. Practice first throwing light and clean and as you master the throw, add more strength and speed. Throwing correctly will help you to improve the mechanics, not only for the Turbojav, but for all throwing sports, such as baseball and football.

## One, Three, Five Step Throw:

A right handed thrower will start with the right foot forward and the right arm back. The Turbojav should be drawn back and the non throwing arm or left arm pointing in the direction of the throw. Both arms should be held high just above the shoulders. Your first step will be with the left foot planting hard and blocking. The left arm at the plant or block should pull

into the ribcage quickly, which will allow the right shoulder and hip to accelerate over the leg as you throw, which will then allow your body to continue to the follow-through position. Once you have mastered the one step throw, you can start practicing with a three step throw, which is done by adding a crossover from left to right before you reach the right position. Do this at low speed, ideally, from walking, then once mastering this, you can add two more steps and throw from a five-step throw.

## Full Approach Throw:

The full approach should be added only once you have successfully mastered the standing 3-5-7-step approach. Follow the guidelines as above, but you must learn to run smoothly, draw back the Turbojav with control and keep the point always pointing at the target or in the direction of the throw. The most common problem that throwers experience is losing the direction of the point. It is imperative that the thrower keeps the point parallel to the ground, not allowing it to move up or down when they start to apply the force of the throw. Most throwers do not use more than 25-30 yards for a full approach or 12-16 steps. Coaches should also advise the throwers of the importance of not stopping as soon as the Turbojav has been thrown, as they must allow the body to follow-through.

Tip of the Pro: Learning to throw from 1-3-5 Steps requires months of practice. Take your time to feel how you build up the strength from the bottom up. Adding speed increases the difficulty, Don

## Medball Training

TURBO • HAMMER • MEDBALL

### Medball types and weight to use?

Medballs come in various weights between 2 and 12 pounds. Age group 8-12 should use 2-4 pounds, 12-15 years old, 2-6 pounds, Our gel ball is 4 pounds is safe and fun. It can be used indoor or outdoor and best for learning and teaching correct mechanics and drills.

### Stretch Reflex with Medball

Begin this drill standing up on your toes with your feet shoulder width apart. You should be about one or two foot lengths away from the wall with your core pressing against it for support. The Medball should be positioned above your head ready to be pulled into the wall. When performing this drill keep your arms at the elbow as straight as possible. Throw the Medball into the wall so it bounces off with enough force so it pulls your arms back behind your head. Then in one continuous motion repeat the process again throwing the Medball into the wall. We are trying to create a stretch in the shoulders so the harder you throw the Medball against the wall the harder it will rebound forcing your arms behind your head. A tremendous stretch in the shoulders is needed in order to throw the javelin.

### Core Development on Stability Ball and Gym Pad

Begin this drill by lying with the small of your back pressed against the stability ball while hooking your feet under a stable object for support. With the Medball drawn back



# Medball Training

behind your head you should feel balanced and in control. Start by crunching your core leaving the Medicine ball behind your head as long as possible...this will create the stretch reflex needed in order to throw the med ball with great force. As the med ball rebounds off the wall catch it and allow its force to drive your arms back as far as possible. Now in one smooth motion and without hesitation start the process all over. As you become more comfortable and start to feel rhythmic and in control of your body you could now apply even greater force so more stretch and core development could be achieved.

## **Single Arm Stretch Reflex with Medball**

This drill is very similar to the two handed stretch reflex but you concentrate on a single arm. Begin by standing up on your toes with your feet shoulder width apart. You should be about one or two foot lengths away from the wall with your core pressing against it for support. The Medball should be placed in your right hand and positioned over your center of gravity ready to be pulled into the wall. When performing

this drill keep your arm as straight as possible. Throw the Medball into the wall so it bounces off with enough force so it pulls your arm back behind your head staying over your CG. Then in one continuous motion repeat the process again throwing the Medball into the wall. We are trying to create a stretch in the shoulder so the harder you throw the Medball against the wall the harder it will rebound forcing your arm behind your head. A tremendous stretch in the shoulder is needed in order to throw the javelin. Repeat with the left arm.

## **Standing Throw with Medball**

This test measures upper body strength and explosive power. The subject stands at a line with the feet side by side and slightly apart, and facing the direction to which the ball is to be thrown. The ball is held with the hands on the side and slightly behind the center. The throwing action is similar to that used for a soccer/ football sideline throw-in. The ball is brought back behind the head, then thrown vigorously forward as far as possible. The subject is permitted to step forward over the line after the ball is

released, and is in fact encouraged to do so in maximizing the distance of the throw.

## **One Step Throw with Medball:**

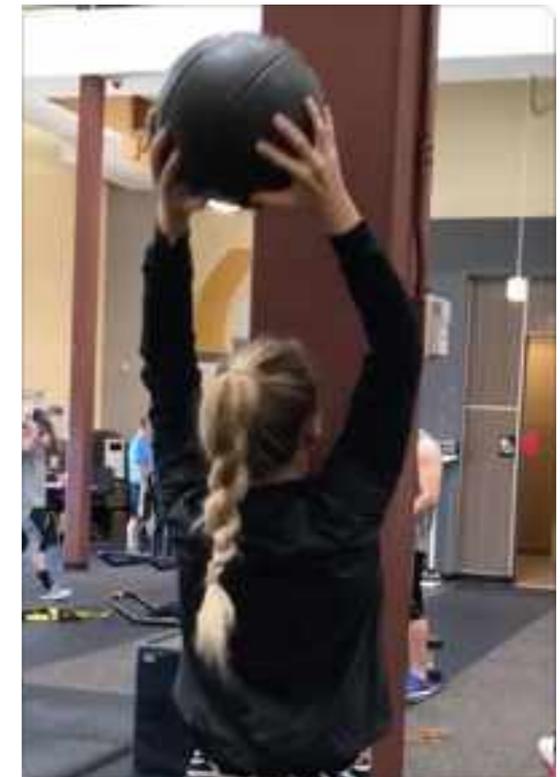
This drill is very similar to the one-step with the Turbo Jav. A right handed thrower will start with the right foot forward and the left foot back with the Medball positioned directly above your head over your CG. Your first step will be with the left foot stepping ahead of your right leg then planting down hard and blocking. Always remember not to initiate the throw with the upper body and always wait for the body to create the block before you throw. Once the block happens now the athlete could initiate the throw by pulling with the core creating hip drive or the "C". The Medball will be released high above your head over your CG creating the stretch reflex. As the Medball leaves your body continue the throw with an explosive follow through allowing your right side to come through in order to absorb your power. Note: An explosive block is always followed by an explosive follow through.

# Medball Training

## Three-Step Throw with MedBall

This drill is the same as the one-step but you just add to two more steps at the beginning. A right handed thrower will start with the right foot forward and the left foot back with the Medball positioned directly above your head over your CG. Initiate the throw with your left foot stepping ahead of your right leg. Once your left foot comes down immediately drive off it onto your right again then forcefully bring your left foot through and plant down hard and block. Always remember not to initiate the throw with the upper body and always wait for the body to create the block before you throw. Once the block happens now the athlete could begin the throw by pulling with the core creating hip drive or the “C”. The Medball will be released high above your head over your CG creating the stretch reflex.

As the Medball leaves the body continue with an explosive follow through allowing your right side to come through in order to absorb your power. Note: An explosive block is always followed by an explosive follow through.



# Distance and Accuracy Development



## Distance and Accuracy practice:

Once the throwers have successfully mastered the target drills they will then move on to throwing for distance...keeping in mind the importance of proper technique and by having control over the throw. Make sure that they learn how to throw with both weak side and strong side. The weak side has no bad habits so it helps the strong side find the right throwing stroke. Mix the games up, throw at garbage cans, targets, basketball hoop, or trees so you can develop accuracy is very important.

## Three...Five...Seven-Step Approach:

A right handed thrower will start with the right foot forward and the right arm back. The Turbo Jav should be drawn back and the non throwing arm or left arm pointing in the direction of the throw. Both arms should be held high just above the shoulders. Your first step should be with the left foot, second step with the right foot moving quickly to allow the third step off the left foot or the block leg to get down quickly. The left arm at the plant or block should pull into the rib cage quickly, which will allow the right shoulder and hip to accelerate over the leg as you throw, which will then allow your body to continue to the follow-through position. Once you have mastered the 3-step, add 2 more steps which would be a 5-step then once you have mastered the 5-step, add 2 more steps which would complete the 7-step approach.

## Distance and Accuracy Games:

# Distance and Accuracy Development

The object of this game is to throw for accuracy and distance. Draw a straight line for throwers guidance. Throws are measured from the toe-board to where the Turbo Jav lands. Then measure the distance to the right or left of the line where the Turbo Jav landed. Then you subtract that distance from the distance thrown. 1st Place 5 points, 2nd Place 3 points, and 3rd Place 1 point.



## **Distance:**

Throws are measured from the toe-board to where the Turbojav lands nose first. 1st Place 5 points, 2nd Place 3 points, and 3rd Place 1 point

## **Skills and Drills:**

Organize athletes into groups relative to how many Turbojav's are available. For example, a group of 24 athletes with 6 Turbojav's should be organized into 6 groups of 4 athletes. Place a group into a safe throwing formation. This means each group will be lined up behind a group marker, all facing the same direction, with adequate space between each group. For further safety, a coach may wish to have the athletes waiting for a turn behind a 2nd marker.

## **Target/Garbage Can & Basketball Hoop**

The aim of these drills is for athletes to throw the Turbojav and hit the allocated target. For the first couple of lessons begin by positioning the throwers 5-10 meters away from the targets. As your athletes

master the skills they can be moved further back. Points should be awarded only if the rubber tip of the Turbojav hits the target. Correct flight of the Turbojav is what we are after while performing these drills. Eventually athletes or groups could compete against each other and points should be awarded not only for accuracy but also for who has the best flight and technique.

## **Skills and Accuracy Games:**

Over the Shoulder System Target:

Points are awarded for the nose only hitting the target. Five points-for inner circle; 3 points-for middle circle, and 1 point-for outside ring

Garbage Can:

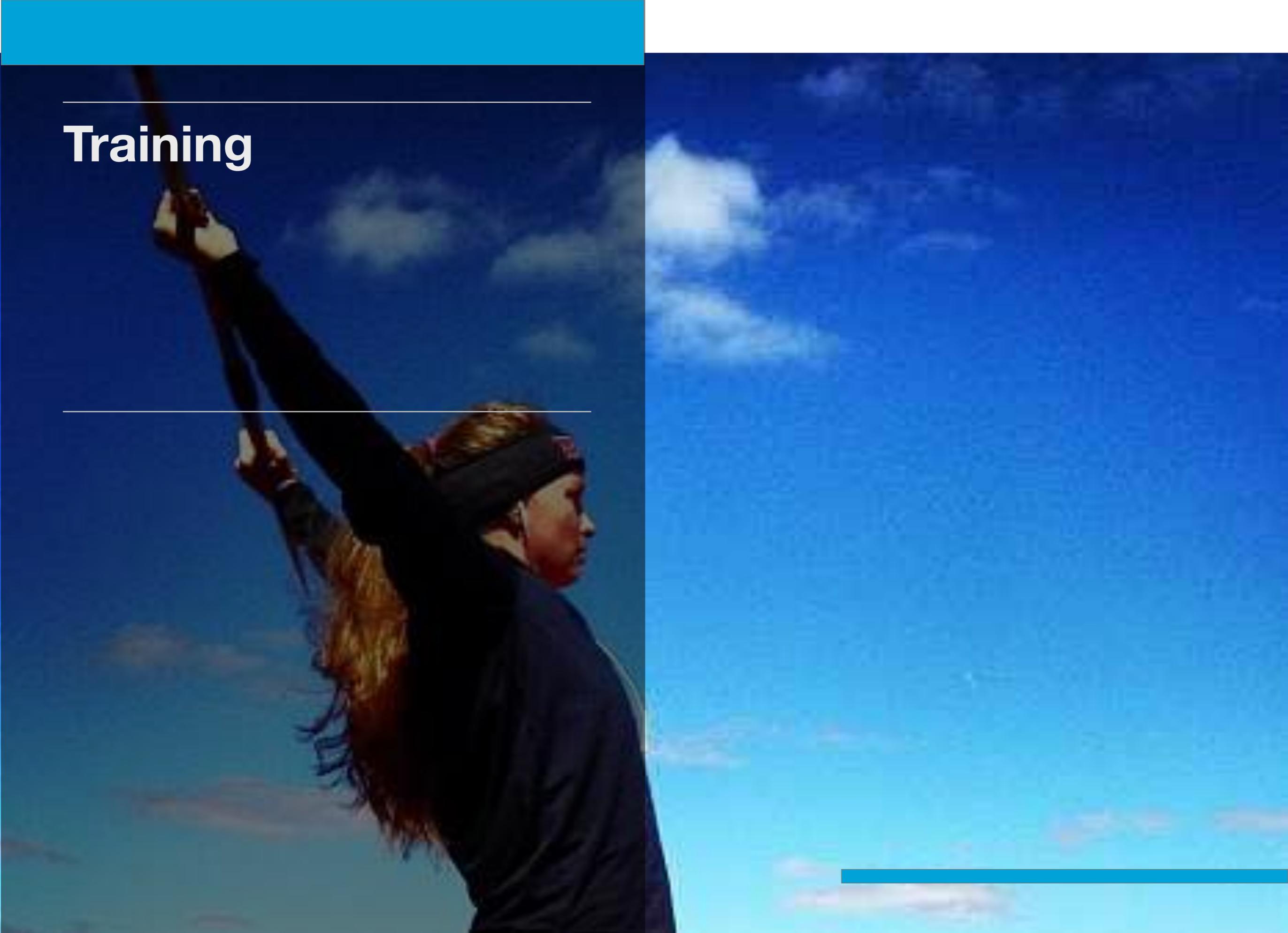
Points are awarded for nose hitting the can and Turbojav going into the can. Five points-going into can, and 3 points-hitting the can

Make up your own games. Turbo Golf, or throwing over fence.

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# Training

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## Goals of training

*“Fine-tune your body to throw far, stay healthy and have fun”.*

### **-Improve conditioning and flexibility:**

You have to become a good runner, jumper and thrower, with an important amount of strength, flexibility and core power to become a good thrower and to prevent injury. Period. No short cuts.

You need to build multi directional agility before you start lifting heavy weights and finding your throwing stroke is most important. The drills will bring the stroke to you. This take time and patience and can only be done well after years of practice and quality training. The weak side is most important part of training and will help you find you strong side stroke. As you train, you will improve your fitness and conditioning, thus you will become a better thrower and help your body whip create the throw. Javelin is one of the most physically demanding events on your back shoulder elbow and knees. You run up and build momentum and jump into the penultimate step and block at plant into the throw that creates a chain reaction from the ground up through the legs and and hips on to the back and shoulders on to the elbow and wrist to the release. Tom’s focus was on the block and left side action that created the reaction and throw.

He never gave command to throw, he gave the the block the command and stretch reflex just happens. It is hard to imagine but toms throwing arm / shoulder were relaxed and waiting for the block to hit. Take a look at his video in slow motion and you will see his right side is loose and jelly like and left side is attacking.

### **-Training smart helps the javelin thrower find the bump energy**

Javelin is an event that includes physics, as you use your body to create a catapult that will launch the javelin. You have to understand how the center of gravity is moved during the throw, how to use your legs and center of gravity to create with a clean block the hight, how you use your rotation to create additional power and how you delay your arm to create a longer acceleration. This creates two things, speed that is transferred into the implement, and hight that will create a better flying orbit. Both will result in a longer distance. Learn how to throw really good at 30%/40%/50%/60%.

The optimal throw is 85-90 % one rep max. I thought it was 110% or more in his early years. Then he found the zone after getting help from sports psychologist Bob Niddefer trying camps in 1982. 6 months later 99.72 m 3272 feet. So quality training is key.

### **- Training helps you to develop mentally, emotionally, physically**

# Goals of training

World class athletes have one thing in common: They are winners, believers of their talent, aggressive competitors that want to win. This can only be done after years of mental preparation. You have to be able to handle the pressure in order to succeed, not only in sports, but in life. You have to learn to believe in your given talents and gifts. You are unique and no-one can tell you: You can't do it. You can, You will, you watch me!!!!!! was Tom's motto all his life. You must have an anchor to have a sense of purpose to throw far and shut up the critics. Just do it !!!!!!!

## - Have fun:

We spend many hours doing a hard training, for many many years. Having fun is vital. Turbojav and Javelin are fun events that can be practiced by various age groups, levels, gender. We want to have fun during training and competition. Its a good way to have fun to do sports. We mixed up training weekly so we would not get board and complacent. We played basketball with 3-4 k med balls , we played soccer with 2k medals, we threw and punted footballs, we threw baseballs, we did weighted uphill and downhill with flak jackets. We threw rocks at the beaches, snow balls in winter, played a lot of tennis as well. Tom was very good swimmer and swam 2-3 times a week 500-700 meters in all strokes and did lots of mobility drills. 1-3 meter diving was a blast unless you missed. lol . Bottom line is to have fun training and make it good quality. Get fit.

## - Learn to focus:

Tom's philosophy was simple. Go to practice with positive attitude with total focus on training so you can get quality workout without distractions. Turn off the cell phone and music distractions. You have plenty of time to do that during the day. We never trained with distractions. Our mission was so focused that it reflected in our results on the field. When we were training you could see how much fun we had and how hard we worked. I was like training animal for 2-3 hours a day but twice a day most times. 1 hour in am 2 hours pm or visa versa. We would mix it up. Three days on one day off, two days on one day off. One light session, one hard session. The mental part of training was at night and during the day when Tom needed a nap. It was good to rest for 45-1 max and do mental training with eyes closed laying down. I close my eyes and try to turn on TV set of me getting warmed up of the competition. It took me six months of practice to turn the TV on. I was seeing static for months and then slowly it started to come and then it became like HD clear picture. That is where i found the throwing zone. The mind and body became one and javelin throwing became easy.



## Principles of training:

There are many things that we need to understand before you get into full training program. TAAT system is very simple to do. It was created over years by Paul Ward and Bill Webb 1977. The first thing to do is to test your skills set on many different tests to assess your strength and weakness for throwing events. Adjust the training load to fix your weakness and maintain strength. Once you are balanced you can go harder and load the training. This will also help your athletes to prevent injuries as well. We not only train to throw farther, we train to prepare when we miss the throw at full speed. It hurts when you miss and you can injure yourself easily if out of alignment.

Also important is how important rest and stretching is just as important as training. Tom did all his stretching in the evening watching TV. Massage therapy and chiropractic adjustments helped as well as good nutrition and hydration. No diet really. We burned like a hot furnace and nothing would stick to us. You must not go to practice hungry as this is counter productive. I always ate 2-3 hours before training. Always had water to hydrate and did it often.

Tom would always warm up 15 to 20 minutes of fun stuff to loosen up and slowly build the session as it went. No rush to get it over with. Rest in between reps was also important. 20-30% effort 40—50 % by one hour your at 60-70% and never go over 80% effort. The

javelin take 5-6 seconds then you have to wait 10-15 sometimes 20 minutes between throws. You can't practice that way. Take 1-2 minutes between reps and mix up drills so you get coordinated and mix in throws during your workout to show your body what the training is for.

Tom took 2 months off from training after summer to allow the body to rest and heal. Training was reduced to beach swimming, easy jogging, tennis, golf, NO JAVELIN throwing for 3-4 months. I would put them away until December and start easy 20-40% max both arms. Resting is fundamental to allowing the body to recover from 25-30 meets of throwing and traveling around the world. Tom never had any major injuries. He did tweak himself few times, groin, shoulder, back, ankle over the years but few days rest and therapy would do it.

### **Active resting:**

After a nice long break from javelin , the body and mind were hungry again to get ready to get ready for next season. We started with for 5-6 weeks of buildup training to get fit, stronger, for the new track and field season. This was the same deal for 18 years. Consistent training, good training partners, good therapy team and most of all

# Principles of training:

good family. Awesome wife who supported me. It is very important that you have a good team to help you reach your goals.

Tom never was injured in more than two decades of javelin throwing. This is a record by itself. Few javelin throwers manage to be on top for more than five seasons, very few for more than 10, only one javelin thrower in history was world class for more than two decades.

## - Test your fitness:

Testing your level of fitness is key to understand where you are and what needs to be improved. Before we start our training cycle, we must have an idea where you are. As training progresses, we need to keep track

We have a standard test that includes measuring your running, jumping, flexibility, strength, throwing capabilities, strong side and weak side. Monitor your weight too. Javelin throwers are slim, strong, light athletes! You have to keep track of what you eat and what you drink. We include a test every month in order to monitor the progress being made. An improvement of the physical abilities will result in a longer throw.

## - Training book

Most athletes keep track on their training and take notes on the training sessions made. This becomes important in the future as it helps the athlete have a clear view of what is being made over long

periods of time. Have a book and take notes on your progress. Its a fun way to understand your activities

## - How to Warm up:

**Before every training session or competition you must be sure that your body is warmed up slowly but steady until you ready to go, Tom would take 20-25 minutes to warm up for competition and wormed up same way like clockwork. Everyone has their own time table. Many are 45-50 minutes and it depends on the person. You must practice the warm up on throwing days to emulate what you want to do at meet. Tom's warm up was to do light sprints and throw football or frisbee to get loose for 10 minutes mix in run through. Then some plyometrics hopping skipping jumping up and down stairs or light bounds on grass for 5 -10 mins mix in few run through, . Then he would mix in throw a 3k shot put for next 10 mins with run throughs and each one little faster. Then start light throwing 3 step 5 step weak side wrong side for 5-10 minutes and then he was ready for full run throwing. Tom did not like long warm up. He need 20-30 mins to get ready max. .**

**- Training cycles:**

Active resting: once the season is over, it is very important that we allow our body to rest. It does not mean that we have to lay in bed and do nothing. No, during this phase, we do other sports activities to keep the body active. Swimming has been one of my favorite activities during the offseason. I still keep swimming, as it is not only a workout, but a way to relax the muscles and keep them strong. Go out for an easy jogging, 15-30 minutes, stretch, do some long walks, play basketball, soccer, tennis. Frequency: 4-5 times a week

**- Prep phase: October-November .**

Fitness

Specific technical training

General Strength

General Throwing

Stretching

Frequency: 5-6 times a week

2 times fitness

2 times throwing and technical training

2 times strength

Duration of training: up to 75 minutes, including warm up-cool down

**- Winter Training December- March**

Fitness build up steady

Specific technical training drills

Explosive Strength drills

Specific Throwing

Stretching Flexibility at Night

Frequency: 5 times a week

**- Preseason Training March April**

This means hard training is over and you start backing off intensity and volume and get more less the stress and start preparing for season. Once you start to taper it will take few weeks for body to get use to less training and more resting. Training session and more fun and easy and you will start to feel more snappy and whippy. You will loose some wight and fell lighter as you muscle tone starts to get more supple and rested. Swimming was huge help in getting the shoulder loose and lets your shoulder wait for the bump of stretch reflex your looking for. Train is reduced to one day training sessions for hour or less and

longer rest periods so you rest 3-4 minutes between reps. When in season it's like 5 minutes seem like eternity but will help you in competitions with delay between throws. Sessions no longer than 1 hour during season. I lost 10 -14 lbs every year from May to August.

#### **- Training: what do we need to improve**

##### **Flexibility/Agility :**

The ability to have enough range of motion to throw with stretch reflex and to prevent the risk of injury. When I was a beginner javelin thrower we had a flexibility coach and did yoga stretches. I became very flexible as I worked at it very hard. Swimming 2-3 times a week also gave me a good range of shoulder motion and the main reason I was never injured in my career.

##### **Strength/Power**

Strength is important but must be able to use it for your event. I never lifted a weight until I started throwing javelin at 19 years old. You must not lift heavy until your growth plates have stopped and that varies. Lifting with bar weight to learn technique is how Tom started lifting and then added weight slowly. Most of the weight work was done 2-3 times a week and mixed in with drills and light throwing. Lifting too much weight is bad and can create many problems. Power is nothing without control. Range of motion is more important.

##### **Explosive Power**

At the Seoul Korea Olympics in 1988, there was a billboard with sprinter Carl Lewis in the starting blocks with high-heeled shoes. The ad said. POWER IS NOTHING WITHOUT CONTROL!!! It was so simple yet true. You get power from training and need it to throw far. Get multi-directional power so you can use it for throwing. Weak side training is all about getting balanced power. Most people do not understand how important it is to get weak sides fixed first and then build the power. Medicine ball throwing overhead underhand and forward create the ground whip power you need and explosive stretch reflex action. The core needs to transfer energy to the implement from the ground to the legs to the arms to the javelin. Most beginner throwers use their arm too much and javelin is moving when it needs to be still waiting and relaxed for stretch reflex to happen. When you are balanced you can use explosive power.

##### **- Training duration**

The younger the athletes, the less serious training has to be done. Games are better and there are plenty to choose from our games system. Kids get bored after 7-10 minutes and lose interest easily. We have target throwing drills. Throwing at garbage cans or basketball backboard are fun and challenging them to hit target bullseye, or land in garbage can or hoop. Mix it up with sprints and long jump or 3 hop game. Make stations so you can do 7-10 minutes and then move to another. One station you can do games (target throws), the other station do distance and next station sprint or jump. The more skills drills the better during the training session, find new ways to motivate

them all the time, make sure you celebrate their progress and make them believe that they can do it. Bets part is it is fun for anyone or any ability to throw turbojav.

### **What can we do?**

Throws (medball, turbojav, javelins, basketballs, baseball, softballs)

Flexibility: passive and active, robber bands, body weight, cartwheels, tumbling

Jumps: all sorts of jumps, long, up, down, over barriers such as hurdles, stairs

Run: forward, backwards, sideways, skipping hopping, uphill or downhill. Relays

Throwing:

Turbojav grip

Standing throw

1-3-5-7 step throw

Full approach: The importance of doing a lot of throws from long approaches.

The importance to do a lot of throws, from different positions, to develop the feel of the throw, the fitness, the precision throwing, feeling the body, how it works together, from legs, to torso, to

shoulder, to arm, to wrist, to fingers. You must feel the javelin, the throw

The importance of throwing clean

The importance to dose the energy put into the throw

Weak side-strong side: 1/3 weak, 2/3 strong

Repetitions of clean movement with all sorts of implements

Cross training, one sports helps the other sports, baseball-football-javelin

### **Rehabilitation and injury prevention**

I was lucky not get hurt during my javelin and baseball career, since injuries are part of sports due to the high tension and workload that the body is exposed during countless hours of sports.

I learned from the very best of the event and from other sports. I developed my own prevention system that has been my key to success during sports. Protect your body (don't don't don't throw hard, throw a lot), building up pressure, slow process to get fit.

*Prevent, rehab, relax, rest*

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# Special Olympics

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## Special Olympics



We started Throwing Zone Athletics 26 years ago with a program called Olymkidz. It was a run, jump, and throw program to introduce basic track and field programs into the township of Katlehong schools. It then grew to many townships around the country over six years and was Olymkidz was funded by Mobil sponsorship amounting to 6000 plus schools in RSA. Then the word got out and Japan, Finland, and USA started the mini javelin in 1993. We moved back to USA in 1997 where we built new molds and started manufacturing in Leominster, Massachusetts (1998) and still making high quality parts today. All of our Turbojav products are made in the Massachusetts. They were the first state to introduce Unified sports into schools in 2012. Elementary schools use 300 gram, middle schools use 500 gram, and high schools use 700 gram. Now, many states and countries are doing Unified sports and are proud to be a part of it. Our commitment to the athletes, coaches, and education programs around the world; it is now available for free on our website. Anyone can go to our website and learn everything they need to know about mini javelin events. We started the 2016 Javelin Games program for your programs to do several throwing skills tests, indoor or outdoor. We have many fun new events for your athletes to enjoy and learn how to throw. We want to help motivate your athletes, coaches and parents with fun stuff to do in track and field. In 2011 the Turbojav became an official event in Special Olympics summer games worldwide. The 300g is the official weight for women and men under 15. The 400g is the official weight for men over 15 years old. Some states use 500 gram for men like Texas Oklahoma Wisconsin and few others as well. All of them are fun to throw and that is most important.

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# Training Program

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# TURBO Drills

## One Arm Feet Together Drills:

2 x 20 Reps



Stand straight and relaxed, with the Turbojav over your head. Aim at a target with your left arm. Pull slowly back and bend your knees. Use your back and your hip to create an arch. Once you feel the shoulder stretching, move your arm forward. Remember to do it strong-side, weak side.

## One Arm Feet Together Drills:

2 x 20 Reps



Stand straight and relaxed, with the Turbojav over your head. Aim at a target with your left arm. Pull slowly back and bend your knees. Use your back and your hip to create an arch. Once you feel the shoulder stretching, move your arm forward. Remember to do it strong-side, weak side.

# MEDBALL Drills

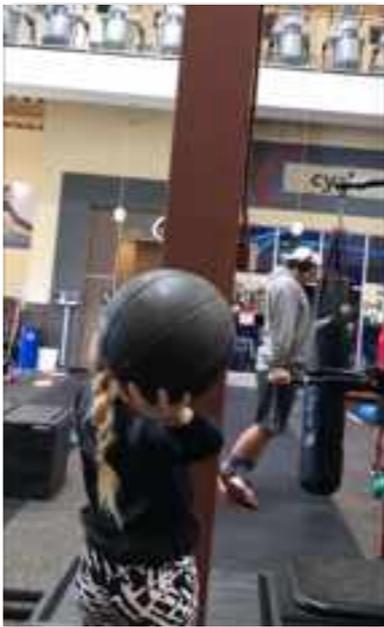
Two Arm Drills:

2 x 20 Reps



One Arm Drills: Right and Left Arm

2 x 10 Reps



One Arm Push Drills:

2 x 20 Reps

One Arm Overhead Drills: Right and Left Arm

2 x 10 Reps



# MEDBALL Drills

Two Arm Drill Drills:

2 x 20 Reps

One Arm Drill Drills: Right and Left Arm

2 x 10 Reps



It is important that you reach as far back as possible. Keep your arms relaxed. Start the movement by pulling your ab muscles and hips down. Follow through.

# RUNNING-JUMPING-FLEX Drills

Jump One leg Drills:

2 x 20 Reps



Jump Down Drills:

2 x 10 Reps



Flex Handstand-Arch Drills:

1 x 5 Reps



Run Crossover Drills

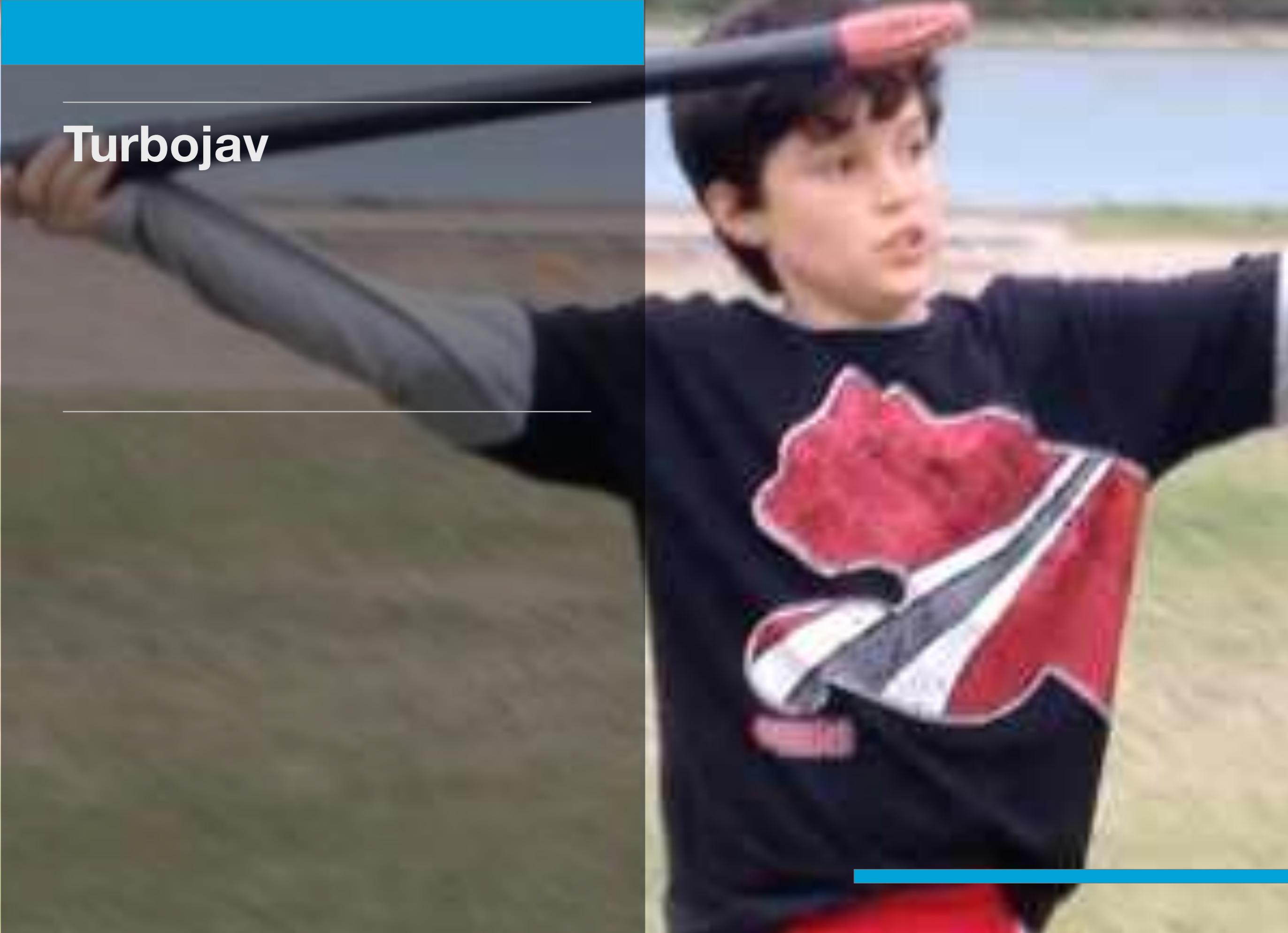
5 x 20 yards



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# Turbojav

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## Turbojav & Turbojavelin



### Turbo Jav VII



All

Our medical grade special blend polyethylene plastic javelins are made with a soft safe rubber nose. We offer six models: 300g, 400g, 500g, 600g, 700g, and 800g. Designed by space and missile engineers to fly like a real javelin, the Turbojav is sturdy and durable as well as safe and affordable. Unlike the real javelin the Turbojavs can be thrown both indoors and outdoors. They come in a variety of vibrant colors that you can choose. Our 300 gram and 400 gram models are white, blue, red, green, yellow, pink, orange, black, gold, and silver. The 500, 600, 700, and 800 gram models will have some colors that we will be listed on website. A Polyethylene plastic Javelin with a soft rubber nose is available in 300g, 400g, 500g, 600g, 700g, and 800g. Created with an engineer to emulate the real javelin, the Turbojav is sturdy and durable as well as safe and affordable. Unlike the real javelin the Turbojav can be thrown both indoors and outdoors. They come in a variety of vibrant colors and can be un-assembled for easy transport.

Turbojav was developed by former world men's javelin throw world record holder, Tom Petranoff. Turbojav is a throwing implement designed to develop correct throwing

# Turbojav & Turbojavelin

technique. Turbojav teaches the basic fundamentals and mechanics associated with the javelin throwing event. The Turbojav was originally designed to teach beginner javelin throwers the same throwing fundamentals in a safe and fun environment. Our Javelin Games were designed to be used for not only for distance throwing, but also used for target throwing, and weak side throwing, Turbojav is also ideal for the more advanced athlete to use as a training implement to improve their accuracy and technique. They are made a special soft nose, non marking, which enhances the safety feature and allows it to be also thrown indoors. Our Turbojavs comes in various weights, from 300 grams to 600 grams. Elementary, Primary schools and Special Olympics use 300/400g. Middle schools and some high schools use 500 and 600g . Our 700g and 800g are for high schools, college, masters, elite and Unified Sports. Each Turbojav comes in a variety of vibrant colors, it also can be unassembled for easy transportation.

## TURBOJAV 300 (SKU TJ300)

The 300g is our lightest weighted Turbojav, it weights 300 grams and is 28” long. This is the official weight in Junior Olympics sub bantam and midget age groups. High school athletes of all ages use the 300g to practice as it is lighter and less demanding on the arm and elbow. Using this weight allows for target practice to gain fundamental basic skills needed to throw far. The lighter weight allows for speed training as well as learning about “the whip”. The 300g is where athletes start the basics then work their way up to the 600g and 700g TurboJavelins. Measures: 28", Diameter: 1.5"

## TURBOJAV 400 (SKU TJ400)

The 400g Turbojav weights 400 grams and is 28” long. This is the official weight in European club level and athletes and is a great product to train with as you get stronger and need more weight. Measures: 28", Diameter: 1.5"

## TURBOJAV 500 (SKU TJ500)

The 500g Turbojav weights 500 grams and is 42” long. USA and Canadian middle school as well as South African primary and Peru secondary school athletes use this weighted Turbojav. As the length starts to increase the difficulty of the throw increases as well. This is a great implement to use to start with before you are introduced into the TurboJavelins and real Javelins. Measures: 42", Diameter: 1.5"

## TURBOJAV 600 (SKU TJ600)

The 600g Turbojav weights 600 grams just like the real women's Javelin and comes in either 42” or 72” in length. Although this is not the same length as the womens Javelin it will fly the same distance if not further. Training with the 600g will help teach the athlete before they move onto the real womens Javelin. Measures: 42", Diameter: 1.5"

## TURBOJAVELIN 700 (SKU TJ700)

The 700g Turbojav weights 700 grams and is 72” long. This Turbojavelin is between the weight of the mens and women's Javelin. This is a great product for women to use for heavier throwing while training. The TurboJavelin is harder to throw as you must throw

# Turbojav & Turbojavelin

through the point. This TurboJavelin will correct their wrong doings by not flying far when they throw incorrect. The TurboJavelin will wobble if the athlete cannot throw through the point or if they throw with a misdirection of power. It is a great corrective tool. Measures: 78", Diameter: 1.5"

## TURBOJAVELIN 800 (SKU TJ800)

The 800g Turbojav weights 800 grams just like the real men's javelin and is 72" long. This Turbo Javelin is a great training tool for women to use as a heavy implement that creates the feeling of their 600g feeling a lot lighter when they throw. Men use this as a training tool to learn to throw through the point and not around their center of gravity. This Turbo Javelin will correct their wrong doings by not flying far when they throw incorrect. The TurboJavelin will wobble if the athlete cannot throw through the point or if they throw with a misdirection of power. It is a great corrective tool. Measures: 78", Diameter: 1.5"

### Age Group and Weight

Turbojav	300G	5-7 years old
Turbojav	400G	8-12 years old
Turbojav	500G	12-14 years old
Turbojav	600G	15-16 years old
Turbojavelin	700G	16-17 years old
Turbojavelin	800G	18+ years old

You can find amazing training videos and tips in our Turbojav Youtube Channel

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# Training Program

## Beginners

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# TURBO Drills

## One Arm Feet Together Drills:

2 x 20 Reps



Stand straight and relaxed, with the Turbojav over your head. Aim at a target with your left arm. Pull slowly back and bend your knees. Use your back and your hip to create an arch. Once you feel the shoulder stretching, move your arm forward. Remember to do it strong-side, weak side.

## One Arm Feet Together Drills:

2 x 20 Reps



Stand straight and relaxed, with the Turbojav over your head. Aim at a target with your left arm. Pull slowly back and bend your knees. Use your back and your hip to create an arch. Once you feel the shoulder stretching, move your arm forward. Remember to do it strong-side, weak side.

# MEDBALL Drills

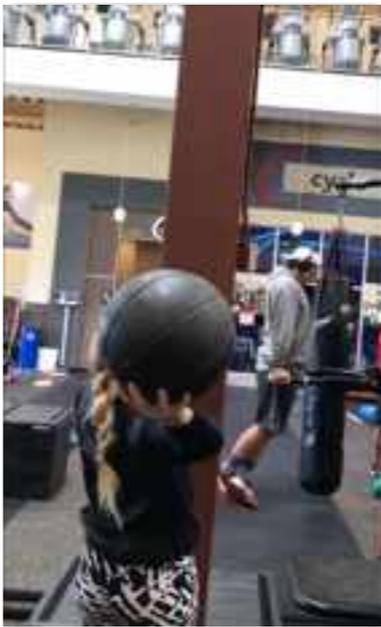
Two Arm Drills:

2 x 20 Reps



One Arm Drills: Right and Left Arm

2 x 10 Reps



One Arm Push Drills:

2 x 20 Reps

One Arm Overhead Drills: Right and Left Arm

2 x 10 Reps



# MEDBALL Drills

Two Arm Drill Drills:

2 x 20 Reps

One Arm Drill Drills: Right and Left Arm

2 x 10 Reps



It is important that you reach as far back as possible. Keep your arms relaxed. Start the movement by pulling your ab muscles and hips down. Follow through.

# RUNNING-JUMPING-FLEX Drills

Jump One leg Drills:

2 x 20 Reps



Jump Down Drills:

2 x 10 Reps



Flex Handstand-Arch Drills:

1 x 5 Reps



Run Crossover Drills

5 x 20 yards



# TURBOJAV-JAVELINS-TURBOSHOT

## Turbojavs-javelins and Turboshot

**TURBOJAV**  
300, 400, 500, 600, 700, 800G  
[Learn more](#)



**TURBOJAV**  
SCREAMER 300G



**TURBOJAV**  
STEALTH 300 & 400G



**TURBOSHOT**  
Shot, Hammer, Medball  
[Learn more](#)



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