2015

TURBOJAV THROWING BOOKLET

"Learn the Thrill of the Skill"

Throwing Zones Athletics

TurboJav • TurboShot • TurboDisc • TurboMedball

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www.throwingzone.com / turbojav.wordpress.com

Multi Directional Core Training for Athletes used by all of the following:

- **Special Olympics programs in many states**
- **Youth and Junior Olympics**
- **Japan Athletics**
- **England and Finland clubs and schools**
- **Little Athletics Australia**
- **IAAF Youth Programs**
- **Parks and Recreations Programs**
- **After School Programs**
- **Paralympic athletes**
- **Rhode Island Middle Schools**
- **Washington State Middle Schools**
- **Kentucky Middle and High schools**
- **Many countries around the world: South Africa, Hungary, Peru,…**

Official Specifications

Implement Specifications for Youth Development Javelin Event

By Dave Post and Tom Petranoff

Overall Length: 695mm+/- 10mm ● Tip Length: 89mm +/- 5mm

Tip Diameter at the largest location: 40mm+/- 3mm

Grip Length: 104mm +/- 5mm ● Grip Diameter: 37mm +/- 3mm

Shaft Diameter: (forward of grip): 38/30mm (Max / Min)

Shaft Diameter (behind grip): 27mm +/- 3mm

Location of front grip: 327mm +/- 5mm from the tip of the tail section

Location of balance point (CG): 380/365mm (Max / Min) from the tip

Number of fins: 4 (exactly) ● Fin Length: 165mm +/- 3mm

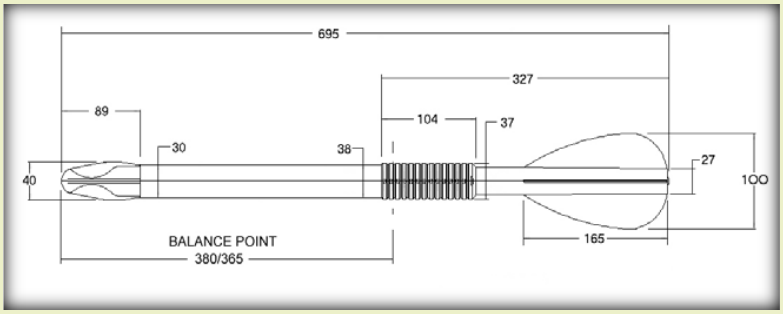
Fin Diameter (peak to peak of opposed fins): 100mm +/- 5mm

Weight 300 grams (Min. for 300 gram model)

Weight 400 grams (Min. for 400 gram model)

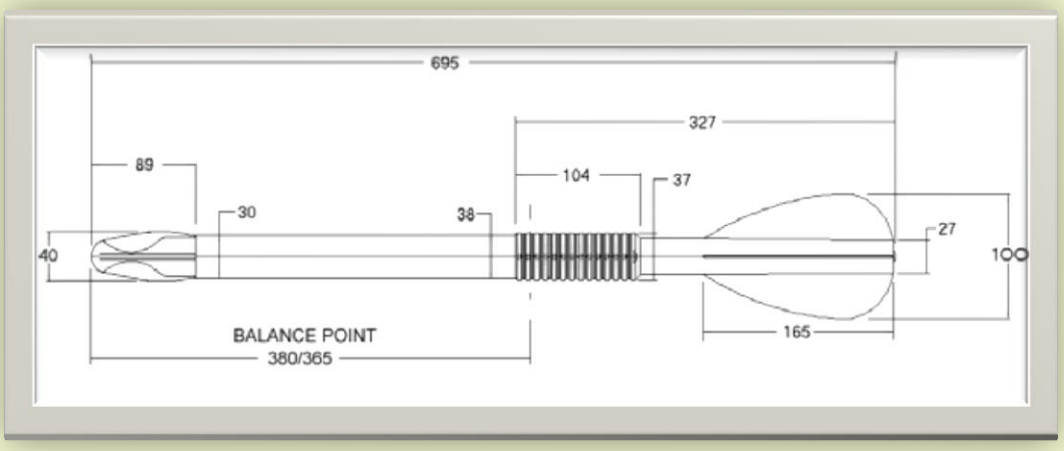
Tip Material: soft rubber with blunt point

Materials: Shafts, grip and fins: plastic



Specifications for Rules for 500/600-Gram Youth Turbo Javelin
By Tom Petranoff

Overall length: 1120mm ±20mm
Tip Length: 90mm ±5mm
Tip diameter at the largest location: 40mm ±5mm
Grip length: 115mm ±10mm
Shaft diameter 38/30mm (Max/Min)
Location of front of grip to the tip of the tail section: 560mm ±10mm
Location of balance point (CG) to the tip: 570/550mm (Max/Min)
Number of straight fins: 4 (exactly)
Fin length: 170mm ±5mm
Fin diameter (peak-to-peak of opposed fins): 90mm ±5mm
Weight: 500/600 grams (Minimum)
Tip material: soft rubber with a blunt point



How to Throw a Turbo Jav

1. The Turbo Jav should always be held with the point facing forward and the tail section behind you. Place both feet squarely on the ground about shoulder width apart with your toes facin inward. Your entire body should be facing forward. The TurboJav should be held at head height and parallel to the ground. It should be directly beside your eye. Your non throwing arm should be pointing in the direction of the throw.

2. Keeping the Turbo Jav level and the point facing forward, the throwing arm is extended back. The opposite arm is pointed in the direction of the throw. The non throwing arm starts to pull into the rib cage which initiates the right shoulder to rotate and start the throw.

3. In a smooth, continuous motion, the **TurboJav is pulled forward and thrown over the shoulder….**This is very important! If you do not throw over your shoulder, but instead throw in a rotational arc around your shoulder and body you will experience bad flights and short distances. Try to get the Turbo Jav to glide like a paper airplane and take easy throws at first to get the feel for throwing with the shoulder.

4. After the throw…the follow through is the most important factor for success in throwing with good mechanics. Stopping your motion short at the throw without continuing your momentum over your blocking leg will make it hard to achieve good flight and distance. Like a swing of the bat or golf club, acceleration must continue forward beyond the throw for at least a step or two.

1. Standing Throw:

With your feet flat on the ground face in the direction of the throw. The Turbo Jav 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 Turbo Jav back being careful not to bend the throwing arm and also not allowing the nose of the TurboJav to rise up or fall down.

2. One Step Throw:

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 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.

Full Approach:

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 Turbo Jav 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 loosing 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 yards for a full approach. Coaches should also advise the throwers of the importance of not stopping as soon as the Turbo Jav has been thrown, as they must allow the body to follow-through.

Tom Petranoff with Turbo Javelin World Record holder Breaux Greer and Dr. Mark Fletcher at the Penn Relays. (Breaux's throw of 284' with the turbo javelin is within 4 feet of his throw with the Olympic javelin.)

Center of Gravity:

The center of gravity is the location in an area on the body where balance, power, leverage and speed can be optimized. Usually the center of gravity changes 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 Turbo Jav, as well as the javelin should be shoulder width apart as seen in the photo. By placing the feet in this position, the implement will thus be directly over one's center of gravity, and will allow all levers used in throwing the implement to be properly moved over the center of gravity.

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. Like the "carry" the implement must be level and the point facing forward.

Leverage:

It is important to have a thrower "apply force" and"leverage" over his/her "center of gravity". A leverage system is the utilization of the body's levers; arms, legs, head to gain complete control and balance. The center of gravity of a thrower changes when the thrower changes the position of his/her levers. 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.

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.

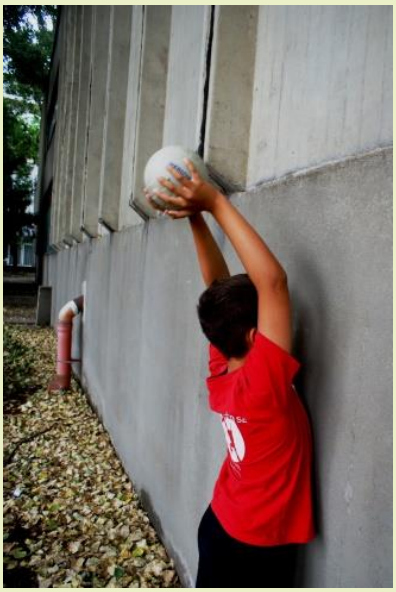
Throwing through the Point:

A common fault of any thrower in any sport is to think that throwing is a pushing motion. With the Turbo Jav 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.

Medicine Ball Training for the Javelin

Stretch Reflex with Med Ball


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 Med ball 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 Med ball 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 Med ball into the wall.

We are trying to create a stretch in the shoulders so the harder you throw the Med ball 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 Med ball drawn back 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 Med Ball

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 Medicine ball 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 Med ball 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 Med. ball into the wall.

We are trying to create a stretch in the shoulder so the harder you throw the Med. ball 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.

MEDICINE BALL STANDING THROW

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 Med Ball:

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 Med ball 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 Med ball will be released high above your head over your CG creating the stretch reflex. As the Med ball 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.

Three-Step Throw with Med Ball

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 Med ball 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 Med ball will be released high above your head over your CG creating the stretch reflex.


As the Med ball 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.

"Learn the Thrill of the Skill"

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.

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:
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.

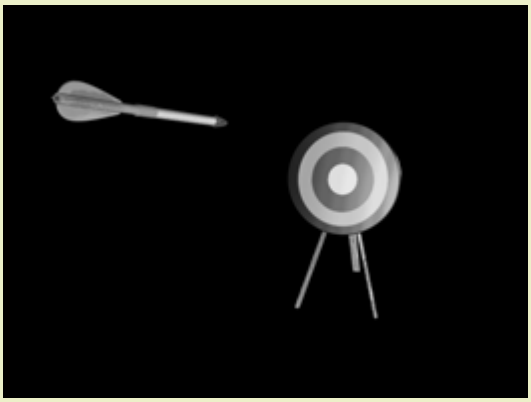
1st Place 5 points
2nd Place 3 points
3rd Place 1 point

Distance:
Throws are measured from the toe-board to where the Turbo Jav lands nose first.

1st Place 5 points
2nd Place 3 points
3rd Place 1 point

Skills and Drills:

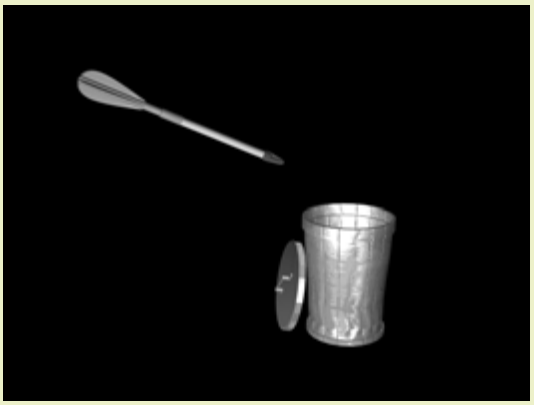
Organize athletes into groups relative to how many Turbo Jav's are available. Example…A group of 24 athletes with 6 Turbo Jav's should be organized into 6 groups of 4 athletes.



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 Turbo Jav 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 Turbo Jav 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.
5 points-for inner circle
3 points-for middle circle
1 point-for outside ring

Garbage Can:
Points are awarded for nose hitting the can and Turbo Jav going into the can.
5 points-going into can
3 points-hitting the can

Basketball Hoop:
Points are awarded for the nose hitting the backboard and going into the net.
5 points-for hitting backboard and going into the net
3 points-for hitting square on backboard
1 point-for hitting outside of backboard

GET YOUR SCORE SHEET!

Skills, Accuracy & Distance

Name	Target Points	Garbage Can Points	Basketball Hoop Points	Distance and Accuracy Points	Distance Points for each athlete	Total Points for each athlete

Overall Point Scoring

Name Places	Target Points	Garbage Can Points	Basketball Hoop Points	Distance and Accuracy Points	Distance Points for each athlete	Total Points for each athlete
1						
2						
3						

Turbo Jav Competition Score Sheet

Date: _____ Place: _____

Boys: _____ Girls: _____

Age Group or level: _____

Name	1st throw	2nd throw	3rd throw	Longest Distance

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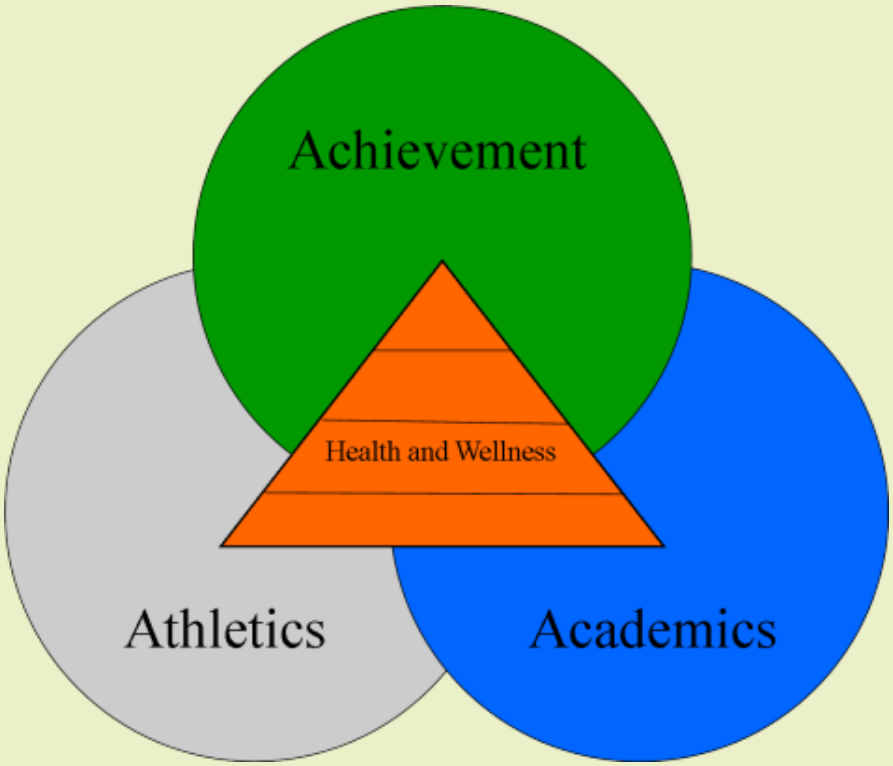
Speed – Accuracy - Distance

- ✓ Anyone Can Throw
- ✓ Throwing Zone Athletics Kids Athletics Trial
- ✓ Throwing Zone Athletics Kids Decathlon
- ✓ Throwing Zone Athletics: Fastest Arm Global Throwing Contest



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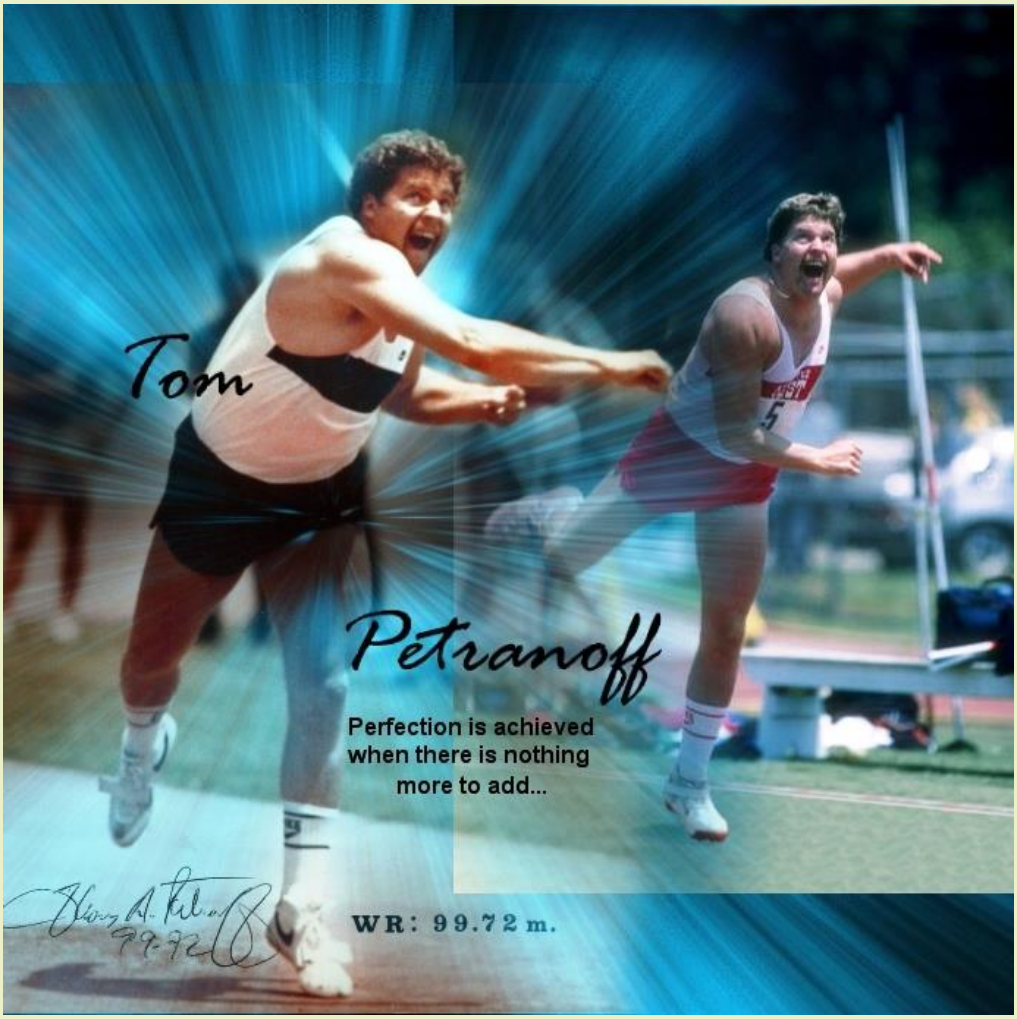

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