Connecting the Run to the Throw in the Javelin

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The Problem: Running fast into the throw makes the throw worse!

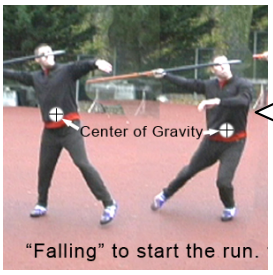
The Reason: The run stops or slows badly on right foot landing, allowing the upper body to pitch forward. This feels powerful and is good for throwing downward, like off a pitching mound to a catcher, but really bad for throwing upward at a javelin's Line of Flight.

The Solution: Run so that the upper body gets "thrown" upward into the throw.

How to do this:

1. The last few steps need to incorporate a Leanback of about 10 degrees, keeping the left hip high. This must be done for at least two steps before the throw, or the Pendulum Effect will ruin the throw.

2. In the last few steps, the feet need to contact the ground ahead of the Center of Gravity, so they pull the athlete along rather than pushing.



No "Falling" off the rear foot! Reaching ahead and up with the knees and feet can give a more Active Landing. This reach ahead, incorporated with a drive off of the right foot all done with a moderate, stable leanback, is sometimes called the "X" Step.

3. Learn to make a fast, powerful final left foot drive during the final crossover step without raising the Center of Gravity. Lots of left arm and shoulder action helps this.

Training for Effective Javelin Runups

Jog 400m, stretch Straddle, Butterfly, Hurdler, Calf. Run 2 x 80m buildups, walk back, stretch as before. Handstands are great too. Do not skip this step.

1. Run 3 x 50m crossovers on the track with a walk back. Hold a javelin flat with the arm back as far as possible. Arm high and back, spine vertical, left hip slightly higher than right, lots of left arm/shoulder action. Don't rush the acceleration. Develop smooth action with swinging legs, lots of Active Landings. This should be done every day – it starts as a workout but becomes a technique practice/warmup.

2. Kick and Reach from a Mark – Do about 4 crossovers (enough to get stable) and as the right foot hits a mark, begin the Kick, Reach, Crossover, Plant and Follow Through steps. A "fake" throw is ok – some like it, some don't. This is best done on a proper runway. Use the track if you have to. Some athletes "get it" in a session, others take several (many) sessions (seasons).

Note: The feeling of the last few steps is like that of running as fast as you can down a steep hill – a kind of skipping, with light footfalls and lots of momentum. Sticking the plant leg out to deflect this momentum as you turn very quickly into the throw is the idea.

Other drills are possible but the bulk of the training for most high school javelin throwers should be in the runup and actual throwing.

To train the runup in a throwing workout:

1. Good traction is essential. Javelin shoes are best but expensive. Cleated soccer, football or baseball shoes can work on grass, and the J-heel is ok if the athlete has sprinting spikes. Flats on wet grass is a dangerous combination and should be avoided. Flats off of a rubberized track surface are only a little better. There doesn't seem to be an easy solution.

2. Run through the throws, even the first short easy ones, so that there is a Follow Through Step. Throwing without a follow through step trains the athletes to stop and throw. Good javelin results come from throwing while running, not while stopping. This requires throwing back behind the scratch line so the follow through step can take place onto a good surface and not into mud.

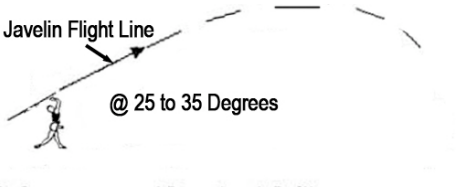
3. The athlete should try to get the javelin to fly by using the speed of the run, not the power of the arm. Later, the temptation is to "add the arm power". This almost always ruins the run. So, they should try to add the arm power SO IT DOESN'T RUIN THE RUN. It's best if they just try to gradually gain distance using the power of the run.

One way to do this is to warm up, build into some easy throws, and place a mark where those throws land. Then, with NO "arm power", try to beat the mark just by adding A LITTLE speed to the run. Keep adding speed, moving the mark farther out (hopefully), until the speed is too much and control suffers. Then slow down, reestablish good controlled throws, and try adding A LITTLE speed again. Repeat this process for up to an hour, and as the athletes gain condition, up to 3x week. 4 weeks of this will result in obvious improvement. Adding "arm power" will ruin this process!

It's very hard for most athletes who throw well in other sports like baseball to "get" that a good javelin throw feels very different than a good baseball throw. This is because baseballs, footballs, rocks, pine cones, and other things we normally throw are thrown from a stand or near stand, not from a near full speed runup. The standing throw feeling is not present in a good javelin throw. So it's important to learn throwing a different way, not using a fall and big arm acceleration to move the object. Throwing from a run feels more like a fast run, a big quick turn and a release.

Glossary

1. Javelin Line of Flight - The path of the javelin's Center of Gravity, hopefully about 25 – 35 degrees, with the shaft of the javelin aligned with this path.



2. Leanback -The angle of the spine and pelvis relative to the ground.
For most of the javelin runup, a slight leanback of about degrees is recommended, increasing to 10 – 15 degrees for the last two steps. See illustration below.

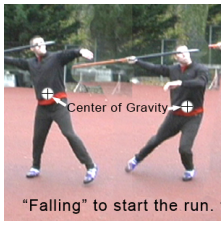
3.The Pendulum Effect – The swinging of the body from a forward (or vertical) lean to Leanback in one step. The effect of this action is to first speed up the lower body as the swing occurs; it then stops as the right foot lands and the upper body overtakes it, resulting in a forward pitch under the throw. Most throwers sense that a leanback helps the throw, but doing it all at once makes things worse.

Big angle change in only a few steps. This causes the Pendulum Effect.

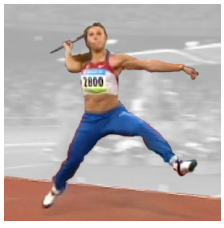
4. Center of Gravity – The balance point of an athlete, usually a few inches above the navel. See illustration below.

5. Active Landing – Pulling the foot back before contact with the ground so as to "slap" the surface.

6. Falling – In running, letting the Center of Gravity fall forward and down slightly as the foot passes under the Center of Gravity. This is a common, effective way to accelerate for most events except javelin and high jump.

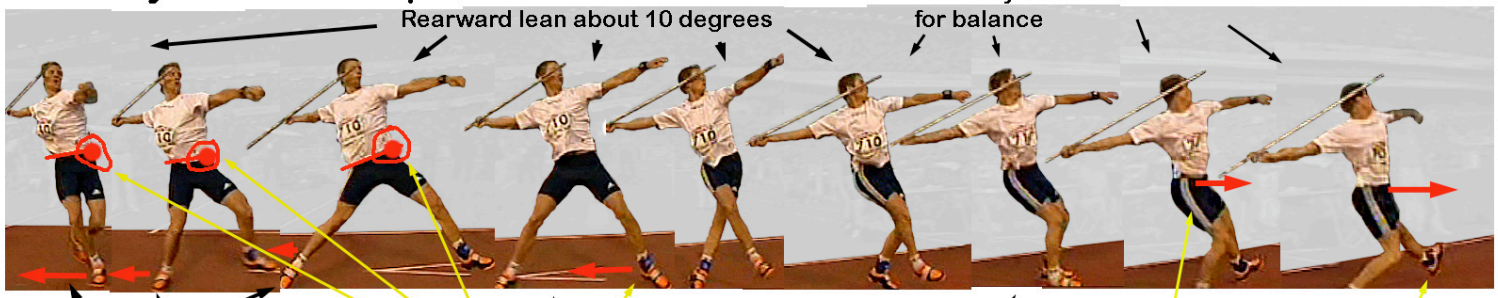


7. The "X" Step – The final step before the final crossover, in which the athlete's arms and legs are reaching so as to resemble an "X". Doing this step this way sets up a much better final crossover and throw. This is an extreme example



8. Follow Through Step – The big step after the plant (block). For right handed throwers, it's the right leg that makes a big step ahead of the left.

The Key to the "X" Step



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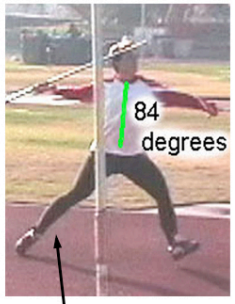
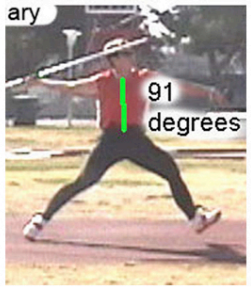


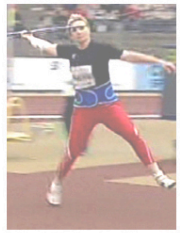
Common fault: Too much "Falling" off the rear foot



This is a little better

This step is too small and the left hip is not high enough.

This is good but she's a little too high in the air



Ditto!

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