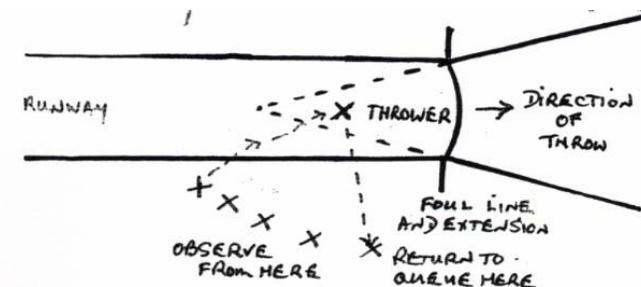


SAFETY

Javelin is a linear event. However extra care should be taken during training or competition to remind young athletes about the dangers. Both ends of the Javelin can cause injury. While observing or waiting for a throw, stand at throwing side, some distance behind the foul line. When a group is involved form a queue in a straight line. The athlete throwing the Javelin steps onto the runway checks landing area and surrounds and behind before with drawing the Javelin and performs the throw. After completing the throw athletes goes back to the end of the queue to observe other athletes throwing one at a time, in the same direction. When everyone in the group has finished their individual throws. "All retrieve" their javelins together at the same time. Walking, not running towards the javelins. When pulling the javelin out of the ground, check if no one behind, place hand over tail point and pull javelin out, by the grip, in the opposite direction it entered the ground. If javelin is lying flat, check both ends, if no-one there lift javelin up. Carry javelin vertically at all times. Carry back! Do not throw. When not in use, stick javelin in ground vertically or in a rack if provided. Watch out for left handers!!! Distance markers, lines or targets can be used for motivational purposes.



Make young athletes aware of the rules by gradually introducing them during training. Most importantly remind them about the rules before competitions.

SOME IMPORTANT RULES

Javelin shall be held at the grip (binding) Thrown over the shoulder or upper arm, not sling or hurled.

Metal head of javelin has to strike ground first for valid throw. Does not have to stick into the ground. Javelin has to land inside sector line, on sector line is out.

Athletes may not turn their back towards throwing sector before releasing the javelin during the trial.

Athletes not allowed to touch lines or ground outside of runway during a trial.

Athlete may lay javelin down, may leave the runway, with first contact behind the extension of foul line at right angles to the runway. Athlete may not leave runway before javelin has landed.

GRIP

Javelin is held firmly along the palm which faces upwards. Fingers behind binding, push javelin out to produced a clockwise spinning effect on javelin after release.

Common grips are: index finger and thumb behind binding.

Triceps
Hands on chair behind, lower buttocks to floor and lift up by extending arms back to starting position - 20 reps

Leg Circles
Lying on back, do small circles with raised straight legs together or one leg at a time - 10 each leg clockwise + 10 each leg anti-clockwise

Lunges
Long step forwards, front leg bent, back leg straight long step sideways, inside leg bent and outside leg straight - 5 each leg each way

Scissor Jumps
Backwards and forwards
- 20 reps

Lateral Jumps
Out sideways and back
- 20 reps

Calf raises
Stand on edge of steps with toes of both feet, lift heels up and down 15 reps toes pointing outwards
15 reps toes pointing straight
15 reps toes pointing inwards

Weight can be introduced to 15 years and up but strictly supervised.

Knee Flex - Lying on back, pull knees to chest, then straighten legs.
Keep feet off floor - 10 reps

Hip Extensions Lying on stomach, arms and legs straight, lift opposite leg and arm together - 20 reps.

Arm Step ups From push up position, lift one hand onto chair followed by other hand. Do same back down to floor - 10 reps each arm

Sit ups (with flex) Lying on back, arms straight by side, legs start straight, bend knees, lift shoulders. Reach with straight arms to touch ankles - 20 reps.

Hip rolls Lying on back, bend knees, roll from side to side - 20 reps

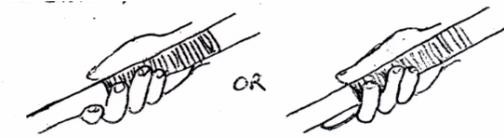
Leg Scissors Lying on back, legs straight, lift up and down then across - 1- each way

Leg step ups Step onto chair forwards followed by other leg and back down off chair - 10 each leg

Sit ups (legs on chair) Lying on back, lift shoulders with arms across chest
- 20 reps



Middle finger and thumb behind binding index finger around or along shaft.



Index finger and middle behind binding known as "V" grip



STANDING THROW

Both feet pointing in the general direction of the throw. Left leg slightly in front. Body weight on flexed rear right leg. Javelin withdrawn with arm fully extend behind body and hand above shoulder. Shoulders turned parallel to javelin and in direction of throw, front left, shoulder high. Left arm folded around chest, underneath the point of the javelin. Left elbow pointing in direction of throw. Start throwing action by extending the rear right leg to get the right hip moving up and forward to pull javelin through, right elbow leading and close to javelins. As the thrower passes over the flexed but firm left leg. The javelin is released over the right shoulder with a fast arm strike and pushing against the binding with the whole of the hand. Palm facing upwards to impart maximum release speed at an optimum angle of about 35 degrees.

SOME WARM UP EXERCISES WITH JAVELIN

- (i) Javelin resting across shoulders. Behind head. Hands resting on javelin. Twist side to side horizontally. Can be done standing, kneeling and sitting.
- (ii) Javelin held at both ends. Keeping arms straight lift javelin overhead behind body. Then lift up overhead to finish against thighs in front of body. Distance hands are apart depends on the flexibility in the shoulders.

GENERAL STRENGTH

Start with exercises using own body weight as a resistance, mainly on a variety of exercises for different parts of the body.

Push ups for shoulders

Finger and wrist flips off wall

Sit ups for abdominal

Trunk and Back exercises

Leg strength through step ups, calf raises, single or double legged hopping. Hurdle hopping can be introduced later.

15 years and up can be introduced to core lifts like snatch, cleans, squats and bench press. Initially with machines followed by free weights like dumbbells and barbells. Strict supervision required at all times.

STRENGTH TRAINING WITHOUT WEIGHTS

(all ages) - takes about 20 min.

(Can be done at home - twice a week or more)

- Full squats – wide stance, thighs finish parallel to floor
– 20 repetitions
- Sit ups (with twists) - Lying on back, knees bent, hands behind head. Lift shoulders touch elbow on opposite knee
- 20 reps.
- Push Ups - Feet on chair 10 reps Hands on Chair
- 10 reps

- (iv) Running games including relays, shuttle runs backwards, forwards, sideways, in and out, around and many others, followed by stretching
- (v) If gym available, skipping, exercise bike or a circuit of exercises for upper body, trunk and legs, followed by stretching
- (vi) Exercises with javelin should be done before throwing it

THROWING AND DRILLS

Aim at doing about 20, increasing to 30 throws per session including drills. Try to arrange non throwing drills to imitate next throwing drill between throws. "Specific strength" usually done with heavier implement, not too heavy! Or other resistance while imitating various movements, involved in javelin throwing.

GENERAL CONDITIONING

Maybe one session concentrate on agility, mobility and speed through various types of running, endurance, short sprints and starts. The other session multiple jumps like hopping, little bit of bounding and hurdling

POWER EXERCISES

Would include single jumps for distance or height. Also include depth jumping and other dynamic plyometric exercises how much depends on maturity and strength of athlete

Can also be done kneeling. Try to touch ground behind by arching back

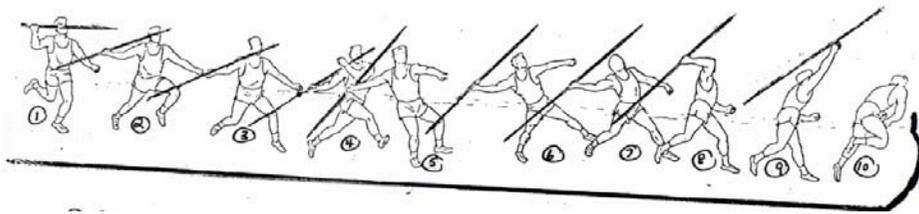
- (iii) Javelin held at both ends. Lift up and do figure 8 movement around head and shoulders. Do in both directions.
- (iv) Javelin across shoulders. Do side bends, maintain straight back, try to touch ground behind with a slight twist to rear
- (v) Javelin across shoulders, from a standing position lunge forward with one leg and twist towards it with the javelin. Do both legs alternatively.
- (vii) Javelin across shoulders, kneel on one knee, place other leg straight out to side 90 degrees. Twist with javelin towards straight leg. At the same time try to touch head on knee of straight leg. Do both legs
- (viii) Javelin stuck vertically in ground. Legs wide apart bend forward and push downwards against binding with both hands. Keep javelin upright. Can be done lying on hips on the ground. One handed pushes can be done against a wall or tree horizontally.
- (ix) Holding Javelin in one hand do wrist twists.

All exercises should be done slowly!
Heavier bar can be used as a resistance for strength

purposes.

Javelin is thrown with a “pulling” action of the body, mainly the hip, and released with a “pushing” action of the shoulder, elbow leading, then a fast arm strike. Emphasis is on a controlled run up through correct footwork to achieve a good throwing position.

Introduce Javelin by showing a picture sequence, video or a demonstration by an experienced thrower, of the complete throwing action. This will give the young athletes a mental image of Javelin throwing.



- (i) Steady run up, Javelin held above shoulder
- (ii) Javelin drawn back as right foot lands near check mark
- (iii) Left foot lands
- (iv) As right leg crosses, shoulders turned to right parallel with runway and Javelin. Hips turn towards direction of throw.

TRAINING

Recommend twice a week for 10 – 14 year old (1 – 1 ½ hours duration)

At least three times a week for 15 years and up (1 ½ - 2 hours duration)

SAMPLE SESSION (10 – 14 year olds)

Warm up 15 minutes

Throwing and drills 20 0 35 minutes

General conditioning 5 - 10 minutes

Warm down 10 – 15 minutes

SAMPLE SESSION (15 years and up)

Warm up - 15 – 25 minutes

Throwing and drills (include specific strength) 35 – 45 minutes

General conditioning 10 minutes

Power exercises 5 – 10 minutes

General strength 10 – 15 minutes

Warm down 10 – 15 minutes

WARM UP OR WARM DOWN

- (i) Easy jog and stretching
- (ii) Doing a continuous series of sprint and hurdle drills followed by stretching
- (iii) Playing ball games like soccer, touch football, Aussie rules or basket ball followed by stretching

(vi) Jumping drills for development of leg strength and rhythm for delivery eg. Hopping, triple jump and side skips with javelin on shoulders.

(v) Right foot planted heel first

(vi) Longer step with left foot

(vii) Left foot planted quickly. Javelin left behind, fully extended. Hip pushed forward and up off rear right leg.

(viii) Elbow leading when forward pull of Javelin commences.

(ix) Javelin pushed forward through grip and released over the right shoulder

(x) Follow through and reverse, landing behind foul lines with right foot.

DRILLS FOR THROWING JAVELIN

Softball, vortex, turbo, medicine ball or light shot can also be used.

(i) Lobs (Lifting)

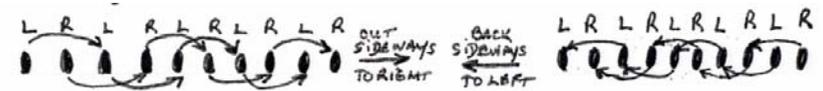
Two-Handed – Left hand in front on binding, right hand holding Javelin. This emphasises keeping javelin overhead.

One-handed – For both two handed and one handed lobs start with left foot slightly in front. Body weight leaning on flexed right leg behind. Holding javelin overhead, elbow high, pointing in direction of throw, push off the rear right foot to step forward with it to pull javelin through. Release javelin overhead by pushing through the binding and not just letting javelin go. Emphasise also the use of legs, trunk and shoulders. Lobbing assists in learning control and proper flight of the javelin. Keeping elbow high avoids pulling downwards through the javelin, causing it to land tail first or hitting one self on the back of the head prior to release.

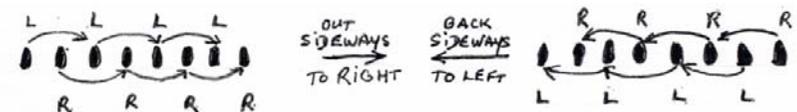
(i) Stabs

Start with javelin above right shoulder, elbow level with ear and pointing in direction of throw. Javelin points downwards or is aimed at a target some distance away (start 10m and increase as required). With left foot on front, pointing in direction of throw, push off rear right foot and step forward past left leg to push javelin at the target. Emphasise use of right side of the body to pull javelin through.

- (iv) Continuous cross steps front. Start with javelin across shoulders, behind head. Arms straight along javelin. Hips parallel to javelin. Feet pointing away from body at right angles to hips. Commence moving sideways to right, lift left foot to cross right foot in front. Then right foot crosses left foot behind. Repeat continuously walking, jogging or running on the track, up and down steps or grass slope. Return to start left foot crossing right foot in front and right foot crossing left foot behind. Can be done without javelin with arms held straight parallel to hips out in front at right angles to hips. Later cross step front bounding can be introduced.



- (i) Front and behind cross steps. Start as cross steps front only movement of feet is different. If moving sideways to right left foot crosses right foot in front, right foot crosses left foot behind then left foot crosses right foot behind and right foot crosses left foot in front. Repeat continuously when returning moving sideways to left, footwork is reversed



Extension of the right leg will push right hip up and forward. Hips lead shoulder, shoulder leads elbow, elbow leads hand. Javelin pushed through the grip over the shoulder and released with a fast arm strike. After release check forward speed of body with a long step of the right leg which lands flexed so that bodyweight can be lowered and avoid fouling.

SOME DRILLS TO IMPROVE RUN UP AND DELIVERY ACTION

- (i) Sprinting various short distances carrying javelin above head
- (ii) Carry and withdrawal. Jog 10 steps carrying javelin above head, then 10 continuous cross steps with javelin withdrawn at arms length, hand above shoulder. Shoulders turned parallel to Javelin. Hips still in direction of run. Left shoulder high, left arm folded around chest with elbow pointing in direction of run. Do about six sets out and six sets back. That is 120 + 120 steps in total.
- (iii) Two step Throws. Start with bodyweight over rear right leg left foot in front, Javelin withdrawn. Do a quick cross step with right leg and simultaneously plant left foot and throw.

Then a fast arm strike, pushing through the binding, palm still facing upwards, straight at the target. If javelin is “thrown”, that is hand turns over from right to left in release, then javelin will “twist” and land sideways, or if javelin is “slung”, elbow injury may result. Accuracy is achieved by keeping the javelin straight at all times. Targets can include plastic bags, balloons pinned down or hoops placed at various distances on ground or hanging from tree branch

- (i) **Step and Reach**
Start with feet together, javelin overhead. Athlete steps forward with right foot to leave javelin behind at arms length, withdraw ready to throw
- (ii) **Medicine Ball**
Front on, two hand over head, forwards: - Start medicine ball behind head. Elbows kept high. Use forearms to throw medicine ball for distance. Feet together or one foot in front.
Two hand overhead backwards: - Holding medicine ball in front of body at arms length. Bend knees as much as possible. Keeping back straight. Straighten legs and lift arms simultaneously to lift medicine ball upwards and throw overhead backwards

Sideways, two hand overhead forwards: - Start one foot in front of the other, medicine ball at arms length in front of body. Then twist shoulders towards the rear leg to take ball behind hip of rear leg. Keeping ball behind body lift over shoulder to throw medicine ball forwards overhead from behind head. Follow through by stepping forward with rear leg or do cross steps before throwing.

Sit up throws: Lying on back, feet on chair or bench, holding medicine ball above head. Sit up and throw simultaneously. Arms can be bent or straight according to abdominal strength of athlete

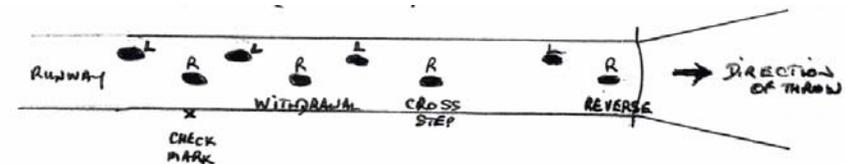
Bent Arm Pullovers: - Lying on back, on a bench, head slightly beyond one end of bench, with medicine ball in both hands near stomach, lift medicine ball with bent arms over head and below head level. Then lift over head and throw or repeat action without throwing, van also be done with straight arms.

Two hand overhead forward on stomach: - Lying on stomach or on bench used for extensions, holding ball behind head. Lift shoulders and chest as high as comfortable to throw medicine ball over head forwards.

- (i) Softball Throws: Javelin style, for arm speed
- (ii) Light Shot Throws: Javelin style. To strengthen shoulder, arm and wrist.

RUN UP

Should be easy and relaxed. Accelerate in early part of run up. Javelin carried above shoulder, free arm active for balance in running action. Have a check mark where Javelin is to be left behind



When right foot lands near check mark right arm is fully withdrawn with hand above shoulder. Javelin should be parallel to shoulders. Close to arm and kept straight at all times. Left foot lands followed by high knee cross step with right leg, followed by longer, quicker left leg. Both feet landing ahead of body pointing in direction of throw with body weight over rear right leg.