

Javelin

JAVELIN BASICS

Goldie Sayers photo by Mark Shearman

The javelin thrower requires athleticism and the ability to transfer momentum from the run up to the implement at release. Developing “rhythm” and “feel” during the throw as well as being fast and dynamic are essential.

The roots of javelin throwing are in classical Greece and the ancient Olympic Games. Many other cultures used spear throwing in hunting and warfare and throwing the spear for distance may well have featured as a popular pastime, however it was certainly the Greeks who developed the javelin into a recognised sport. In the ancient Olympics, javelin was the 3rd event of the all important pentathlon.

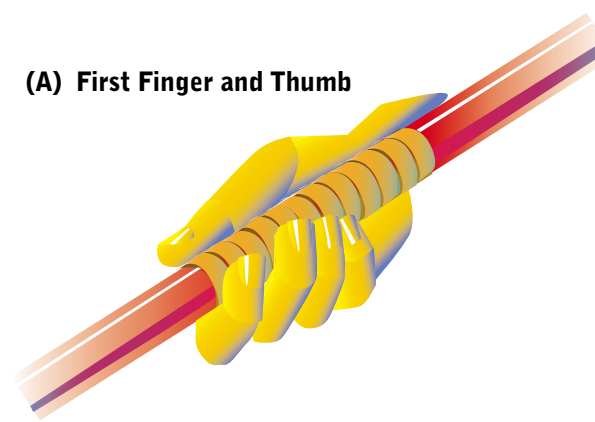
However, the longest throw did not necessarily crown the winner – points for style were also awarded. Techniques have changed over time. The ancient Greeks made use of a 40cm strap wound round the centre of the javelin, leaving 2 finger loops. The Greek or orthodox style of throwing evolved into modern times with the javelin being held around the middle. There have also been freestyle events whereby the javelin could be held anywhere and could be thrown in any manner (including hammer style!) Lemming, the Swedish champion at the time, preferred the orthodox style and out-threw them all!

JAVELIN TECHNIQUE

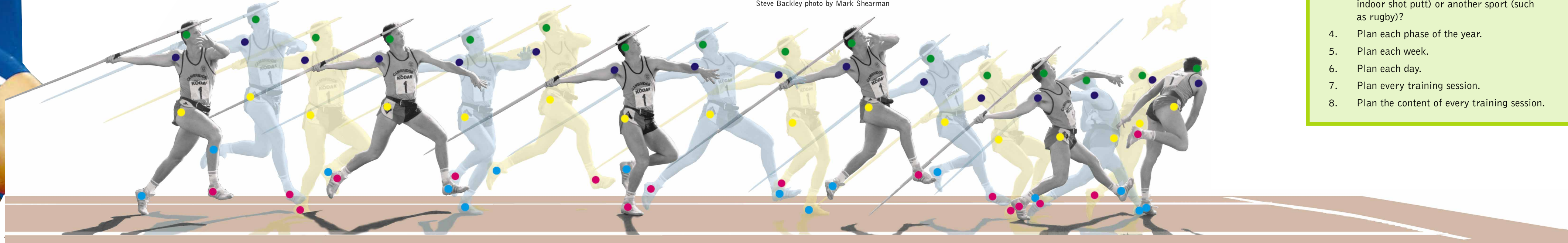
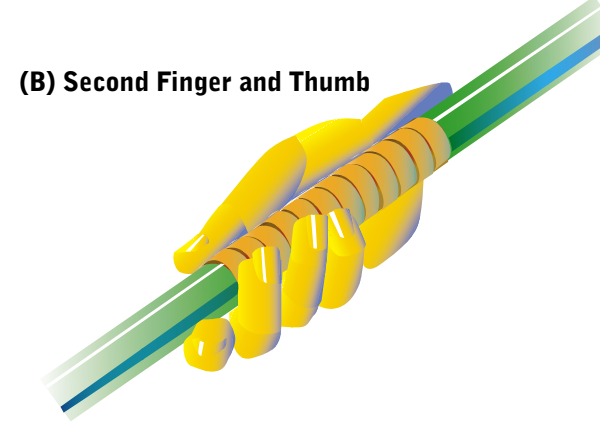
The Grip

There are 2 principle grips used for throwing the javelin, both of which allow for good contact with the grip by the “control” part of the finger and thumb. The grips allow the fingers to be used to stabilise the javelin in the hand.

(A) First Finger and Thumb



(B) Second Finger and Thumb



Steve Backley photo by Mark Shearman

TRAINING FOR JAVELIN

General Considerations

1. Plan efficiently.
2. Decide how much time is available for training. Don't plan a schedule for six days a week if the athlete only has three days a week for training.
3. Plan the athlete's competition year. Javelin is a summer only event, but will the athlete do another event during the winter (perhaps indoor shot putt) or another sport (such as rugby)?
4. Plan each phase of the year.
5. Plan each week.
6. Plan each day.
7. Plan every training session.
8. Plan the content of every training session.

World Records

Records as at 1.1.06

Senior Men			
98.48	Jan Zelezny (CZE)	1996	Jena
U20 Men			
83.87	Andreas Thorkildsen (NOR)	2001	Bergen
Senior Women			
71.70	Osleidys Menéndez (CUB)	2005	Helsinki
U20 Women			
62.93	Juan Xue (CHN)	2003	Changsha

UK Records

Senior Men			
91.46	Steve Backley	1992	
U23 Men			
89.58	Steve Backley	1990	
U20 Men			
79.50	Steve Backley	1988	
U17 Men			
73.56	David Parker	1996	
U15 Men			
62.70	Paul Godwin	1989	
Senior Women			
64.87	Kelly Morgan	2002	
U23 Women			
64.87	Kelly Morgan	2002	
U20 Women			
55.40	Goldie Sayers	2001	
U17 Women			
49.83	Hayley Thomas	2003	
U15 Women			
41.44	Louise Watton	2001	

Significant Barriers

Men			
60m	1912	E Lemming (SWE)	
65m	1919	J Myrta (FIN)	
70m	1928	E Lindquist (FIN)	
75m	1933	M Järvinen (FIN)	
80m	1953	B Held (USA)	
85m	1956	E Danielsen (NOR)	
90m	1964	T Pedersen (NOR)	
95m	1980	F Paragi (HUN)	
100m	1984	U Hohn (GDR)	
RULE CHANGE			
85m	1986	K Tafelmeier (West GER)	
90m	1990	S Backley (GBR)	
95m	1993	J Zelezny (CZE)	
98m	1996	J Zelezny (CZE)	
Women			
40m	1929	E Braumüller (GDR)	
45m	1932	N Gindele (USA)	
50m	1947	N Smirnitkaya (USSR)	
55m	1954	N Konyayeva (USSR)	
60m	1964	Y Gorchakova (USSR)	
65m	1972	R Fuchs (GDR)	
70m	1980	T Birzulina (USSR)	
75m	1985	P Felke (GDR)	
80m	1987	P Felke (GDR)	
RULE CHANGE			
68m	1999	T Hattestad (NOR)	
70m	2001	O Menéndez (CUB)	

The approach

The Approach – ‘Front on’ running to accelerate the thrower and the javelin

- The javelin is grasped firmly but comfortably, and lies down the hand (rather than across).
- The palm faces up in the carry and the grip hand is relaxed.
- The javelin is held horizontally over the shoulder at head height.
- The thrower looks forward.
- The acceleration run (6-12 strides) is relaxed, controlled and rhythmic.

Steve Backley photo by Mark Shearman

The withdrawal

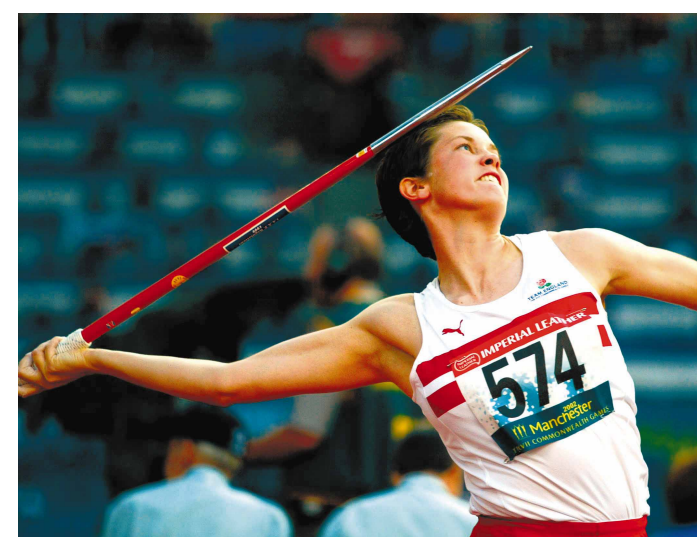
The Withdrawal and 5 stride rhythm – To position the thrower and javelin correctly for the delivery

- The withdrawal of the javelin starts on a left foot landing.
- Left shoulder faces the direction of throw.
- Throwing arm extends backwards during first and second stride.



Kelly Morgan photo by Mark Shearman

- Throwing arm is at shoulder height or slightly higher after withdrawal.
- Tip of the javelin is close to the head, level with the eye.
- The pre-throwing stride is initiated through a very active ‘running off’ from the left foot.
- The right knee drives forward.
- Throwing arm and shoulder axis are in parallel.
- The ‘impulse’ stride is longer than the final, delivery stride.
- Maintain sightline.



Delivery

The Delivery – To transfer velocity from the legs, trunk, shoulder and arms to the javelin

- Right foot is placed at a natural angle to the direction of throw.
- Axes of the javelin, shoulder and hip are parallel.
- Right knee and hip turn forwards actively.
- The throwing arm remains extended during the hip strike.
- The left foot is driven to the ground to stabilise the left side.
- The right hip drives forward against the left leg to bring the body into an arc position.
- The arm is pulled through last, with the elbow close to the head.

Recovery

Recovery – To stop the forward momentum of the body and avoid fouling. A controlled recovery is a result of a ‘good’ throw. Uncontrolled recovery reflects a poor throwing action. Therefore a good delivery should be the main focus

- Leave sufficient space between the braced left leg and the foul line for the recovery step.
- Legs are reversed quickly after the release.
- Right leg is bent.
- Upper body sinks down and left leg swings backwards.

FUNDAMENTALS OF A TRAINING REGIME

Javelin throwers must be

- Athletic & agile
- Good at learning skills
- Powerful (strong and fast)
- Supple
- Competitive

So training sessions for developing athletes will include

- Static and dynamic mobility work
- Drills which enhance javelin skills
- Javelin throwing
- Strength development (general jumping, general throwing and weights)
- A warm down

Training sessions for mature athletes will be more frequent and specialised, with separate sessions devoted to drills, javelin throwing, general throwing, general strength, specific strength, power development, preceded by the appropriate warm up and mobility work.

Equipment and Basic Rules for Javelin

Javelins were normally made from steel or aluminium although since 1996, carbon fibre javelins have been allowed. They consist of 3 parts – head, shaft and cord.

All implements are subject to various checks before competition to ensure that they comply with minimum weights and measurements (length and diameter etc.).

Javelin weights

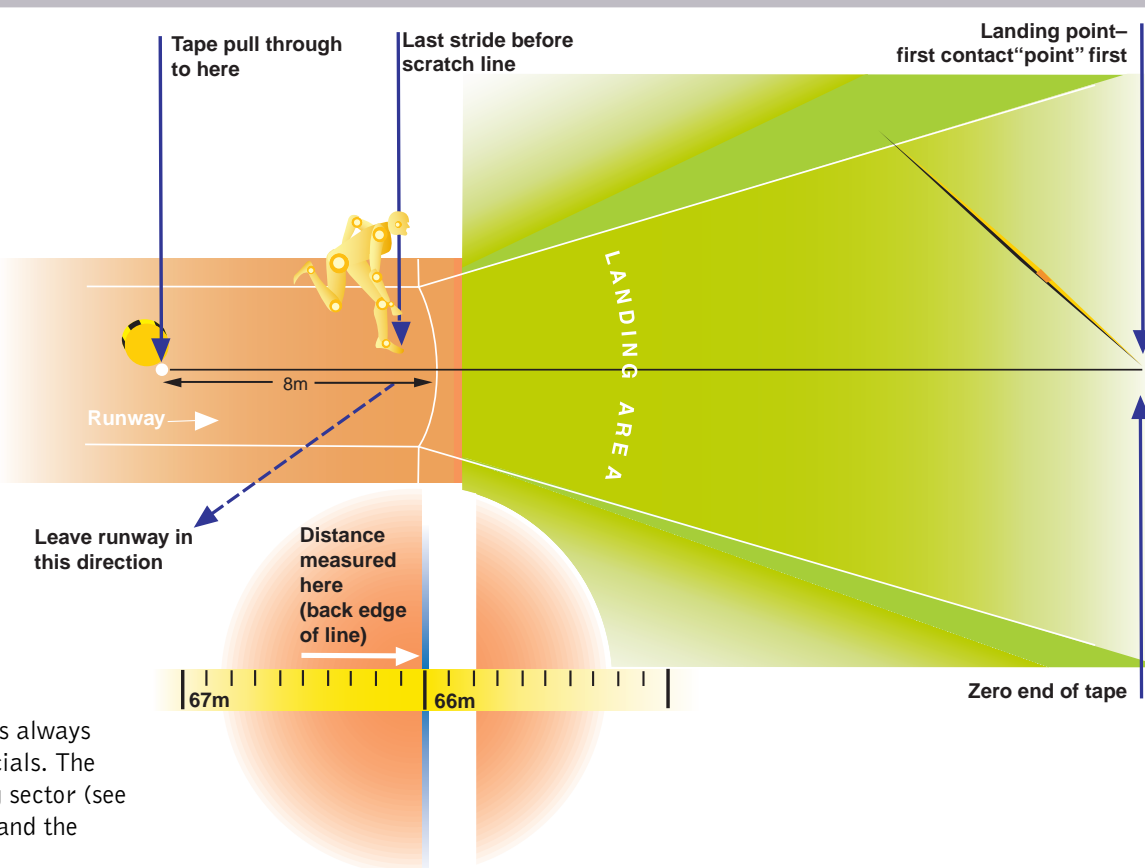
	Senior	Under 17	Under 15	Under 13
Men	800g	700g	600g	400g
Women	600g	600g	600g	400g

Footwear

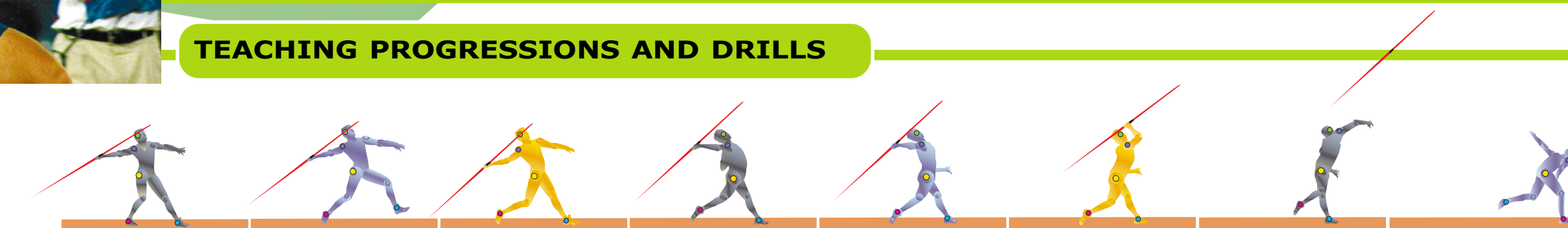
Javelin throwers wear shoes or boots (which support the ankles) with spikes on the sole including 4 spikes in the heel.

Basic Rules

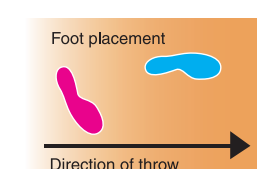
The javelin must be thrown over the shoulder and not slung. A horn is always blown before a throw to ensure the safety of all competitors and officials. The javelin is thrown from a straight run up area into a marked throwing sector (see picture). The javelin must be thrown from behind the “scratch line” and the thrower must not leave the runway until the javelin has landed.



TEACHING PROGRESSIONS AND DRILLS



Standing Throw (Right handed thrower)



- Stand side-on to direction of throw, with both feet in contact with the ground, weight over

the right foot, right knee slightly flexed and left leg extended.

Extend right arm fully at shoulder level with palm facing upwards.

Left arm is long and across the body.

- Left arm remains fixed until after release to maintain side-on position and to allow the feet to remain “powerful”.

Initiate throw by rotation of the right knee towards the direction of throw.

- Drive the right hip against the fixed left side.
- Finish the throw with arm extended forward and above the level of the head

- Left foot remains fixed with body controlled and balanced behind the braced front leg.

- Throw from the legs. The standing throw should aim to mimic the position that the thrower will be in following a run up rather than being the position for throwing optimum distance from standing.

3 Stride throw

- Start with the right leg forward and the javelin withdrawn. Maintain the balance of the body over the right leg.

Step onto the left foot and then run into the ‘impulse’ stride, with the feet landing quickly one after the other. Stay back with the balance over the right foot.

- The right leg lands with a slightly flexed knee and foot ready to strike immediately upon toe contact.
- The right flexed knee rotates forward.

The left leg braces to block the right side and allow momentum to be transferred through the body into the arm and finally the javelin.

- Release high with elbow close to head.