



# JAVELIN THROW



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## About the Tutorial

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Distance, speed, and angle of projection are some of the basic key terms that can define the game of Javelin Throw. It is one of the most ancient sports of the mankind that is widely popular all over the globe. In this game, the athlete needs to throw a spear like structure into the air to make it land within a specific boundary target. This article will help you grasping the essential basic knowledge about the javelin throw.

Though the "How to play" section is not very comprehensive, yet it is sufficient enough to supplement a beginner with necessary playing techniques.

## Audience

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This tutorial is aimed at giving an overall knowledge on how to throw a javelin successfully. It provides step-by-step illustrations and guidance to help beginners gain all the relevant information about this game.

## Prerequisites

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All that you need to have is a passion and eagerness to learn the game of Javelin Throw. It assumes no prior knowledge of the game.

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# 1. Javelin Throw – Overview

Javelin is a popular track and field sport that is present since the inception of mankind. In ancient days, people used to hunt animals using spear and so did the soldiers in the battlefield to kill their enemy. With the gradual evolution of mankind, the skill is transformed into a sports category and today, it is played by almost all nations over the globe.



## Objective

The objective of Javelin Throw is to throw a spear-like structure (technically called as **javelin**) with your bare hands with maximum force so that it will land within a prescribed marking area. The game is played in both men's and women's category. Constant practise and ability of judging angle, speed and distance is needed to play this game efficiently.

## History

Throwing of spear was used for many purposes like killing animals, fighting with enemies in a battle field etc. but the trace of it in the sport form can be made from ancient Olympic Games in 708 BC. Target throw and distance are the two disciplines in which the game was used to be organised. In early 1870's throwing javelin like poles were found in Germany and Sweden. However, in earlier days, running up before the throw was not

there. By the time of 1890's limited run ups were introduced and soon unlimited run ups were introduced.

For the first time in Intercalated games, javelin was introduced in the men's category and soon after its popularisation, in 1932; it was introduced in women's category in 1932 Summer Olympics. International Associations for Athletic federation (IAAF) recognised the first official world record in 1912.

### Participating Countries

Javelin Throw comes under the track and field job event. Since its introduction to Intercalated Games in 1932, the popularity and demand of this game by different nations grew exponentially. Many Asian and non-Asian countries have their active participation in this category of game. List of some of the major dominating Asian countries include China, Japan, Uzbekistan, India, Saudi Arabia, South Korea etc. In 2014 Asian games, **Zhao Qinggang** of China bagged the gold medal in men's category and **Zhang Li of China** bagged gold medals in women's category.

Similarly, many non-Asian countries have shown their talents in events like summer Olympics. Countries like, Norway, Greece, Finland, New Zealand, Czech Republic, etc. are dominating in the competitions. In 2012 summer Olympics, **Keshorn Walcott** of Trinidad and Tobago bagged the gold medal in men's category while **Barbora Spotakova** of Czech Republic bagged gold in women's category.

## 2. Javelin Throw — Environment

Before moving into the “how to play” section in detail, let’s know about some basic details about the game.

### Javelin

A javelin has three main basic parts. They are:

- Pointing metal head
- Shaft made up of wooden or metal
- A cord grip positioned around the centre of gravity

The normal standard length of a javelin varies in between 2.6 to 2.7 metre for men and 2.2 to 2.3 metre for women.

### The Runway

The minimum length of the runway should be 30 metre and maximum is 36.50 metre. It is marked by two parallel lines, whose length is 50 metre and they are separated by a distance of 4 metre.

### The Throwing Arc

It is basically an arc of a circle having 8 meter of radius. The strip is made up of white paint and should be flushed onto the ground. Width should be 70 mm. From the extreme point of the arc, lines having length of 1.5 meter should be drawn making a right angle to it.

### Throwing Sector

From the centre of the arc two inner circles have been drawn. Throwing sector is enclosed between them. The emerging point of the two lines is that point, at which the edge of the runway meets the arc. They form an angle of 29 degrees in between them.

### The Correct Way to Hold a Javelin

Before heading into the techniques and tactics one should know how to hold the javelin. Hold the javelin with the cord grip of the palm of your hand. Curl your fingers around the shaft of the javelin to have a proper grip. At the back edge of the cord grip, your thumb and forefinger should be tightly aligned. Against the palm of the hand, other fingers should be positioned properly across the javelin.

# 3. Javelin Throw – How to Play?

## The One-Step Throw

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If you are practising for the first time, then you should probably start from this type of throwing method. This is one of the basic forms of throwing javelin. Let's analyse it in a step by step procedure.

- Hold the javelin at a height above your head firmly and position it parallel to the ground.
- Put your both feet tightly close to each other, facing them in the direction of the throw.
- Put the palm under the javelin.
- Pull the javelin back with your shoulder as far as possible. However, the position of the javelin should be still parallel to the ground and facing straight towards the direction of throw. This position is popularly known as **T** position.
- If you are a right handed thrower, then step forward with your left foot and throw it violently in the forward direction.
- Without pulling down towards the shoulders, the throwing hand position should be kept high throughout the throw.

In addition to the quick action of the throwing hand, a good forward drive is needed for the right hand side of the body. Before the throw, when you are pulling back the javelin, make sure that your palm is under it all the times. Make a low bend in the elbow and pull the javelin back along with your shoulder keeping the tip of it along your eye level but it should be kept as high as possible.

If you are right handed, then your non-throwing arm is left hand and that is of primary importance for you. At the time of throwing, place the non-throwing hand in front of your body. It is quite natural that after the throw, your non-throwing hand will drop down and will swing towards back in a reaction. Here the thrower must block his left hand. That means it must seize the free movement of the left hand when it reaches close to his/her body.

It is also important to position your body behind your left foot during the course of action. By grounding your left leg properly into the ground, you should form a strong base for throwing. Don't push your right leg forward instead bend your knee in the direction of throw.

As a mode of initial practise, try to throw the javelin up to a minimum distance of 8-10 metres. Once you get the grip over this technique with rigorous practise, aim for longer distance by throwing your javelin with some tilting angle with respect to horizontal. However; most of the throwers fail at this point in maintaining the tip of their javelin in the direction of throw.

One should make athletic drill of the throwing hand in order to have a strong throw. Keep the right hand and shoulder as high as possible so that your body, left leg and throwing

hand (right hand) will make a "C" shape. To summarise the correct sequence of the throwing hand will be as follows;

- Drive the elbow up, initiate the throw
- Drive forward and up with the shoulder
- Keep the hand high, follow the path of the javelin
- Turn down the thumb.

## The Running Throw

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After getting a good practise over one step throw, we can move to practise the running throw. This also requires much hard work. Basically the two types of running approach we will discuss over here and they are;

- The four-stride approach run
- The ten-stride approach run

Let's discuss about these in brief.

### The four-stride approach run

Here you have to first stand about 7 to 8 meters behind from the take-off point. Hold the javelin firmly with your hand and pull it backwards with your shoulders as far as possible but here also you should point the javelin tip towards the direction of throw and should keep it parallel to the ground. Keep your feet initially close to each other and with small steps start moving forward.

Take a small step with the right foot and then with the left. Keep repeating the steps and with a very fast stride finish it with the left foot. Maintain the level of the javelin throughout the session on your eye level. With the last finishing stride your left foot should grasp the ground firmly and you should fling the javelin in the air with vigorous force with an angle of 40 degrees.

Some other important aspects of this throw are;

- Even after the release of the javelin, your left foot must be grounded. Instead do the recovery with the help of your right leg by stepping behind the arc line. It is quite natural that your left leg may bend while attempting to throw, but try to regain it back to straight position before the javelin leaves your hand.
- Blocking action of the left leg is accompanied by the left arm. It stops the backward movement of the left elbow.
- Make the forward and down movement of the toe upon the ground during the throw. Keep the toe of the right foot till as much time as you can on the surface.
- One important movement about the hip is that, it should turn in clock wise direction along with the shoulder during the backward movement of the javelin.
- The position of the shoulders should be kept in parallel with the run up during the sideways turning.

In the run up, the impulse stride is the longest stride and during this period the athlete needs to land on bent leg. This is because, it will allow the athlete to move his body with a fast stride to have an effective delivery. If you make sure you're landing with the ball of



your right foot, then bending of the leg is achieved automatically. Now let's discuss about 10 stride approach.

### The ten-stride approach run

The athletes those who are learning the playing techniques, for them, four stride approach is good to start with but as you get the grip over it, practise should be done with 10 stride approach. This is the approach that most of the senior athletes do in their routine practise schedule. The length of this run up generally varies in between 17 metres to 21 metres. Let's discuss the process in a step by step manner.

- You need to keep both your feet together and should hold the javelin above the shoulder level.
- Your hip and feet should face towards the throwing arc direction. Now starting from the right foot, take the forward strides.
- If you are a beginner, then count the first five strides. During the fifth and sixth strides just pull the javelin back along with your shoulders.
- During the seventh stride, make sure that you have pulled the javelin back fully. During this period the hips completely turns clockwise and your right leg crosses over the left leg. Hence this stride is often termed as **Crossover**.
- Make the impulse stride (the last before stride) as much longer as you can. During this phase your left leg should pass your right leg before even it touches the ground and your throw should be low bound one with a forwarding action.
- At last with a very strong stride, complete the throwing action.

Here couple of things should be noted. First of all an impulsive fast stride can be made at last, by increasing your run up distance to a certain extent. The second last stride is often termed as **second crossover** because in this step the thrower feels like he is in a floating condition. This has two major advantages.

- First it does the blocking action by locking the left leg upon the ground till the javelin is thrown.
- Second it helps in achieving a fast last stride.

Although the bent over of the left leg is natural after the landing of foot, still it should be held as much straight as possible to give an effective block. To make the throw proper, let your left arm move with the running rhythm in a natural flow. It should be kept high and in front.

Another important thing that the athlete should maintain during **T position** is that, he should keep the level of both the shoulders same. As the left elbow reaches the body, the blocking action is aided by the left arm itself. After throwing action is being completed, recover yourself by landing on your right foot before the arc.

Fast running aids the throwing speed of the javelin but that does not mean that we will increase the speed to much extent because excess speed has its own disadvantage. Among all the disadvantages, the two most important ones are;

- Throwing out will be done to the side
- Javelin can be pulled down

A slight precaution while throwing can prevent the above.

- Try to maintain the level of the elbow high.
- Maintaining the level of javelin parallel to the ground
- At the time of delivery, use the left arm for blocking purpose and left leg for stretching purpose.
- Always release the javelin above the shoulder level
- After releasing the javelin, chase it with your hand with thumbs being down.

# 4. Javelin Throw – Safety and Exercise

## Javelin Throw – Safety Measures

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Though the game seems easy by reading, yet not that much safe, if you are not aware of the safety measures. The front part of the javelin is sharp metallic pointed. So any imbalance in throw can cause physical injury to you or any other person nearby you. So let's know about some important safety measures.

- During the time of throw, make sure that no one is standing in front or behind of the thrower. Observer should stand at the sides of the athlete.
- From a particular position throwing should be done and it should be thrown in a particular pre-defined direction.
- After the throw, carry the javelin back to the throwing area instead of throwing it back over there.
- Unless you are throwing the javelin, hold it vertically instead of holding it with some angle. Make sure that the pointing portion is facing down.
- The right way to put a javelin on the ground is to stuck it vertically down; otherwise the angular position may hurt someone's leg.

## Exercises to Improve Your Game

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### Final arm action

To do this exercise, hold the javelin above the shoulder level by standing on your left foot. The tip of the javelin should point downward. With a little bit pull back. Throw it 3-4 metre ahead with a stabbing action. Next time repeat the same with much force to a distance of 10-15 metre.

### Heavy ball throw

Stand with your feet well apart on the ground. Your rear leg should be slightly bent forward while the front leg should lean backward a little but with a stretching position. Your hand should be above your shoulder holding a ball in the palm. Throw the ball to front with a rotating action of your hip and elbow.

### Directing flight

This exercise is done to for getting some idea about throwing angle. The thrower should stand with the javelin as shown in the figure. One person should hold it from behind with a desired angle. Thrower's hip must point forward and he should throw the javelin with a great thrust. More practise will give the idea to the athlete about the exact angle of throw.

# 5. Javelin Throw – Rules

Knowledge of throwing techniques will help you emerge as a winner in a competition. You must also be aware with various rules of a match else you will earn a penalty even after your best throw. So here are some of the important rules.

- Holding the javelin must be done at the grip part and should always be maintained above the shoulder level.
- For valid throw, the javelin must lie before the specified zone and its tip should hit the ground.
- There is a special marking line on the runway within which the athlete needs to throw.
- The athlete should not leave the ground until the javelin lands on the ground.
- After the throwing action has been made, the thrower should not turn back towards the pointing direction, until it lands.
- The number of throws allowed per athlete is same as that of the discus throw.
- Once the competition has started, the athletes cannot use the perimeter for practise purpose.
- Using any device that may assist the thrower in throwing is strictly prohibited. For example, tapping of fingers are not allowed unless there is a wound.
- The throw will be considered as a foul in the following cases:
  - Improper throw of the javelin in the attempt.
  - Demarking of the line with any body part.
  - Player going out of the marking line while throwing
  - The tip of the javelin lies outside the edges of the landing sector.
- The time is increased to 1 minute if there are 2-3 number of competitors. In case only one competitor is left, time is increased to 2 minutes.

# 6. Javelin Throw – Champions

International Association of Athletics Federations (IAAF) is the governing body of Javelin Throw. Every participating country has its own governing body to organize the game successfully throughout the calendar. Here is a list of some important tournaments in this category.

- Summer Olympics
- World Championship
- Asian Games
- World Indoor Championship
- Commonwealth Games
- IAAF Continental Cup
- Mediterranean Games

Let us now take a look at some of the famous champions of Javelin Throw and their achievements:

## Jan Železný

Widely regarded as the all-time greatest javelin thrower, Železný has won the gold at the 1992, 1996 and 2000 Summer Olympic Games. In addition, he has three World Championship titles.

Železný holds the world record at 98.48 metres and the World Championships record of 92.80 m. Železný is the only athlete to throw more than 94 meters with the new type of javelin and what's more, he achieved this feat five times.

## Steve Backley

Backley has won four gold medals at the European Championships, three Commonwealth Games gold medals, and two silvers and a bronze at the Olympic Games. Besides, he has two silvers at the World Championships. Backley is the only British track and field competitor to win medals at three different Olympic Games. His personal best of 91.46 metres still stands as the British record in men's javelin.

## Keshorn Walcott

Walcott represents Trinidad in javelin throw. He became the youngest Olympic gold medalist in men's javelin when he clinched the title in 2012. In the history of Olympics, he is the first black male athlete to win a gold medal in a throwing event. Walcott has another unique distinction of being the first athlete in any track and field event to win World Junior and Olympic titles in an individual event the same year.

## **Fatima Whitbread**

Fatima Whitbread is a former British javelin thrower. Whitbread broke the javelin world record with a throw of 77.44m in the qualifying round of the 1986 European Championships and became World Champion in 1987. She won the 1986 European Championships in Stuttgart and the 1987 World Championships in Rome.

Whitbread is a two-time Olympic medalist with a bronze at the 1984 Los Angeles Olympics and a silver at the 1988 Seoul Olympics.

## **Barbora Špotáková**

Barbora Špotáková is the current Olympic champion, as well as the world record holder in Javelin Throw. She became the Olympic winner in 2008 with her last throw, 71.42 m, which then was the new European record. In the same year, Špotáková broke the world record in the first round to win the IAAF World Athletics Final with a throw of 72.28 m. 2008. In addition, Špotáková had won silver at the 2006 European Championships in Gothenburg.