

# Pole Vault



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## About the Tutorial

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Pole Vault is a popular track and field event. Apart from physical fitness, it requires understanding of some basic physics such as the way of transferring the kinetic energy of your speed into the gravitational potential energy through the elastic energy of your vault. Both men and women can participate in this sport.

This tutorial will guide you in understanding the sport from a grass-root level along with its rules and important playing techniques.

## Audience

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This tutorial is meant for anyone who wants to play Pole Vault. It is prepared keeping in mind that the reader is unaware about the basics of the sport. It is a basic guide to help a beginner understand this sport.

## Prerequisites

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Before proceeding with this tutorial, you are required to have a passion for Pole Vault and an eagerness to acquire knowledge on the same.

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# 1. Pole Vault – Overview

Pole vault is a popular track and field event. Apart from physical fitness, it requires understanding of some basic physics such as the way of transferring the kinetic energy of your speed into the gravitational potential energy through the elastic energy of your vault. This tutorial will guide you in understanding the sport from a grass-root level.

The very first step of Pole Vault requires the athlete to run down the track holding the pole in his hand. Before jumping, the athlete has to plant his pole in a metallic pit known as **box**. Next, he will jump in the air to get to a required height level. Then throwing the pole away, he swings and turns in the air and finally lands on the mat. Both men and women can participate in this sport.

## A Brief History of Pole Vault

Though the exact origin of this technology is not known yet but it is a well-known fact that in earlier times, people used pole vault method to cross big obstacles while crossing rivers, drainage etc. Armies also used this method to cross the long wall of the enemy during the war time. In 1829 B.C, Pole Vault competition was introduced for the first time in **Irish Tailteann Games**.

In 1896, this sport was included in modern Olympics as a popular track and field event. With his victory in 1912, Harry Babcock gave US its fifth consecutive pole vault win. In earlier days, the materials used for pole construction was tree limbs in the form of large sticks. With the evolution of new technology, now fibre poles are being used extensively due to good strength and flexibility.

## Participating Countries

Pole vault comes under the track and field event. Since its introduction to modern Olympics in 1896, the popularity and demand of this sport grew exponentially in different nations. Many Asian and Non-Asian countries have athletes who participate actively in this sport. their active participation in this sport.

The list of Asian countries to produce good athletes in Pole Vault include China, Korea, Japan, Iran, Kazakhstan, and Iraq. In 2014 Asian Games, Xue Changrui of China bagged a gold medal in men's category and Li Ling of China bagged gold medal in women's category.

Many Non-Asian countries have also shown their talents in events like Summer Olympics. Countries like Great Britain, Russia, Germany, Chez Republic, and Greece have dominated this sport for a long time.

## 2. Pole Vault – How to Play?

Before going deep into the techniques, one should know the basics to get started with pole vault. Some of the basics are described keeping in view of a right-handed athlete. For a left-handed athlete, the direction should be reversed.

### The Grip

With making shoulders wide apart, hands should be placed roughly on the pole. Your right hand palm should face up and left hand palm should face down. The best way to know about the grip is to start with a random step. Place the pole at the backside of the box and then by grabbing the pole with your right hand, make full extension of the arm above the head.



In case, you want to locate the perfect take-off spot, plant the toe of your left foot on the ground directly below your right hand. Till your left hand comes in contact with the pole, keep it up with shoulders being in square position. During this process, the position of

both of your palms should be inward. By following the above procedure, you can get an overall idea about the gripping and take off position.

## Carrying the Pole

From the position of take-off, do the following two things:

- Right hand should be brought to the hip level.
- Left hand should be lowered up to the level of chest.

Keep the tip of the pole in upward position but not in perfectly vertical position.

Initially, to carry the pole easily, the tip of the pole should face upward but with gradual progress, slowly it will come down as the right hand will move upwards by pivoting towards left. Just keep one thing in your mind that the tip of the pole should be maintained at your eye level before the plant.

## Running Approach

During the running phase, the body posture should be upright. During the initial phase of the running, if an athlete wants, he can lean a little bit forward but with the advancement of the approach he has to regain back the straight position. The main purpose of this phase is to develop speed and rhythm needed during the take-off time.

One should keep focus on one fact that the ground contact should be made directly underneath the body and should be as quick as possible. It is necessary to count the take-off steps indeed. For the beginners, 3-5 take-off steps would be a nice approach. For a full approach run, 7-9 steps is more than sufficient. Maintaining the pole in a balanced position during the running phase is an art and should be practised well during the practice session. However, a slight bouncing motion is allowed.

## Planting the Vault

Planting is a critical process of Pole Vault where the athlete converts the horizontal height into vertical height. To achieve this, he has to be a bit slower and lengthen his strides, as this will give him a good lift. After the last take-off stride, planting is made and the order of leg that is followed over here will be left-right-left.

As soon as the last take-off step touches the ground, the level of the pole should be maintained at eye level. Instead of extending the arm towards the back of the plant box, raise the tip of the pole vertically upward.

By the time the right foot touches the ground, the level of the pole should be parallel with the runaway and your right hand should be near the ear level. During this phase, the position of the left hand should be in bending position directly in front of the face. Extension of the arm should be made above the head as the take-off step touches the ground. Keep your right hand above the forehead.

Do not keep both the hands above the forehead level, as it will give rise to far take-off step which in turn will create problem in developing a successful vertical lift. To practice it more precisely, follow the drill every day.

- By carrying the pole high, walk several steps with a feel for left foot.
- With the passage of time, slowly lower the pole with keeping in mind that left foot will be used for planting purpose.

- As soon as the left foot touches the ground, forward pushing of the pole should be done with uplifting.
- Try to maintain the pole as close as possible to your body by pushing the bottom arm all way forward.
- Just before take-off foot hits the ground, extension of the pole must be made 100% with the bottom arms.

### Take-off and Drive Swing

As soon as you leave the ground, the take-off is initiated. Full extension of your arms and hitting of the tip of the pole to the plant box should happen at the same time during this phase. Make sure that the pole tip does not get jammed at the plant box as this will cause a heavy damage of energy and as a result of which the vertical movement of the pole will not occur.

You should avoid the clothes lining effect which occurs when you take-off in a hurry without waiting for the tip to get connected with the plant box. As soon as you take-off with your left foot, hold the pole with a much pressure with both of your hands and try to achieve a reverse C position where extension of the take-off leg will be behind the body and right hand behind the head.

Move the chest up forward and try to move in between the hands. Now it is the time to do drive swinging where you will be pushing and driving the pole to a vertical level but this would never be with the hands. Now to master this art, there is a small drill for you known as **rock-back drill**.

The step-by-step procedure is as follows:

- Get a good plant of the pole tip in the plant box.
- Now swing on till the level of your shoulders.
- Tuck on it and bring the bottom arm elbow into it.
- Now stay on the shoulders level over there.
- Safely and slowly land back on the pit.

Initially use short runs and low grips and as you get comfortable with this drill, increase the height of the hand grip one at a time.

### The Swing Up

The pole continues to move vertically up and the athlete completes his drive swing. Here the performer has to push the take-off leg from the reverse C position and make a whip so that it will swing in the reverse direction. Swinging power directly depends upon the run of approach and the take-off. Upward pulling movement of the body should not be made and during the time of short drill, the left arm should collapse and come closer to the chest level.

### Extension-Pull-Turn

Most of the energy of the athlete is lost during the plant or take-off process. If the vault is planted successfully, it will give you energy during the unbending process and will lift you up. As you reach to the top of the pole, turning is important at that point and you can

take the help of your hands for the pulling process. If you are a left hander, take the right foot and start the turning process.



### **Flyaway / Clearance**

As you start to push yourself back from the top of the pole, legs start to pike around the bar. During this position, release the bottom hand first from the pole. Try to pass your hips over the bar without knocking it off. To create a hollow chest, your thumb should point down. Now make a final push off with your top hand and release the pole.

# 3. Pole Vault – Rules

Knowing the playing technology is of no use unless you are well aware with the playing rules. The rules of this sport are made and governed by IAAF (International Association for Athletic Federation). Now let's learn about some important common rules.

## General Rules

- On the scoring form, it is mandatory to mention the weight of the athlete next to his name.
- At any particular height, maximum three trials are allowed.
- After three consecutive failures in trial, the athlete is automatically removed from the tournament.
- After taking the first attempt, it is advised to take second and third consecutive attempts at the same height.

## Trial Time Limitation Rules

Trial time limitation rules are as follows:

- An athlete has to perform within two minutes of calling his name.
- In case three competitors are there, a window gap of four minutes is allowed and in case one is remaining, a max of six minutes of window gap can be allocated to perform.

In case there is a tie between two persons for a same height, then the athlete having less number of attempts is declared as winner.

## Rules regarding Competitions

- No artificial weights or aid are allowed to be used in the competition.
- Using shoes that can give unfair advantage to an athlete is strictly prohibited.
- Unless there is a wound, no tapping is allowed on any part of the fingers. However, tapping at the wrist is allowed.
- Without the permission, no athlete is allowed to use the pole of any other competitor.
- Planting box must be checked properly to make sure that it is free from any foreign substance.

## Rules regarding Foul

A foul in Pole Vault is caused due to any of the following reasons:

- Displacing the crossbar from its original position with the help of pole or athlete's body.
- Failing to cross the crossbar after being lifted up from the ground.
- Without clearing the bar, touching any part of ground or landing part with either body or pole.
- Incorrect upright position during the clearance of crossbar.
- Displace the crossbar by connecting an upright after the clearance.

## 4. Pole Vault – Champions

IAAF (International Association of Athletic Federation) is the governing body of Pole Vault. Every participating country has its own governing body to organize the sport successfully throughout the calendar.

Here is a list of some important tournaments in this category.

- Summer Olympics
- World Championship
- World Indoor championship
- Continental Championship
- Continental Indoor Championship
- Commonwealth Games

Let us now discuss briefly about some of the champions who have made a mark in Pole Vault.

### **Sergey Bubka**

Sergey Bubka is a former Ukrainian Pole Vault. He made entry into the world athletics in 1983 through World Championship held in 1983 in which he won a gold medal.

Until the dissolution in 1991, he was a representative of Soviet Union. Bubka was the first athlete to clear 6.00 and 6.10 metres of height record.

Bubka won IAAF World Championships consecutively six times. He made his debut in 1981 and participated in European Junior Championship.

### **Maksim Tarasov**

Makasim Tarasov is a retired Russian Pole Vault. He played on behalf of Soviet Union, Unified Team and Russia respectively in his entire career.

His medal list includes three gold medals from Olympic Games, World Championships and European Championships.

His best jump is 6.05 meter. Besides gold medals, he has also won a bronze medal in 1992 Olympics and two bronzes in World Championships.

### **Dmitri Markov**

Dmitri Markov is a retired pole vaulter who represented both Belarus and Australia. He has won gold medal in 2001 and bagged silver medal in 1999 World Championships. His best performance was 6.05 meters in 2001 World Championships.

He has also won a gold medal in 1996 European Championships. In 2003, he won a bronze medal in World Athletics.

In Commonwealth Games held in 2006, he won a silver medal. Due to chronic foot injuries, he retired from the sport in 2007.

## **Svetlana Feofanova**

Svetlana Feofanova is a pole vaulter who represents Russia. In her career, she has won four gold medals, four silver medals and five bronze medals. In Olympic Games, she has won a silver in 2004 and a bronze in 2008.

In World Championships, she has won a gold in 2003, a silver in 2001, one bronze in 2007 and one in 2011. In European Championship, she has won two gold medals one in 2002 and another one in 2010.

Feofanova has also participated in World Indoor Championships and won one gold, two silvers, and two bronzes.

## **Yelena Isinbayeva**

Yelena Isinbayeva is a legendary Russian pole vaulter who has won 21 gold medals in total, out of which two are from Olympics and three are from World Championships.

In addition, Isinbayeva has won four golds in World Indoor Championships, one gold in World Cup, five golds in World Athletics Final, one gold in European Championships, and one in European Indoor Championships.

She has won the rest four golds in junior championships. Her best performance is 5.06 meters in an outdoor championship. She has been honoured three times with Female Athlete of the Year by IAAF.