



Shot put



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About the Tutorial

Shot Put is one of those few track and field events that is present since the inception of modern Olympic Games. The objective here is to throw a spherical dense object as far as possible through a pushing action. It requires immense muscular strength and a good balance upon your body. In this tutorial, we will discuss the basic techniques and playing methods of Shot Put.

Audience

This tutorial is meant for anyone who wants to play Shot Put. 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

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

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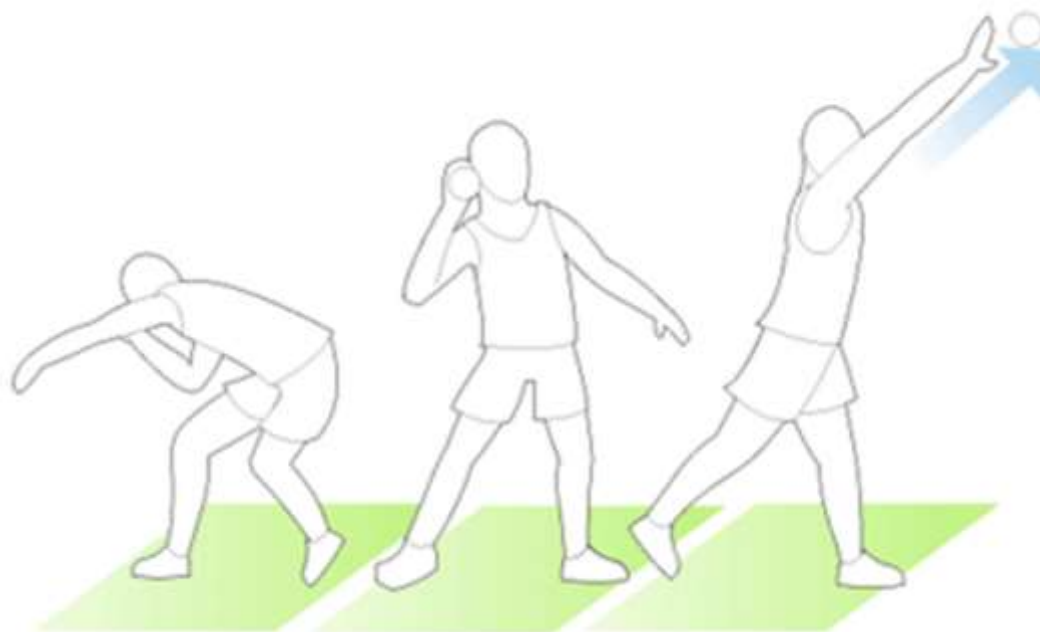
Table of Contents

About the Tutorial	1
Audience.....	1
Prerequisites.....	1
Copyright & Disclaimer	1
Table of Contents.....	2
1. SHOT PUT – OVERVIEW	3
2. SHOT PUT – BASICS	5
3. SHOT PUT – GLIDE TECHNIQUES	7
4. SHOT PUT – ROTATIONAL STYLE.....	10
5. SHOT PUT – RULES.....	12
6. SHOT PUT – CHAMPIONS	13

1. Shot Put – Overview

Shot Put is a sport where an athlete needs to exercise his throwing power with a heavy object. It is a track and field event. Men's shot put is present since the inception of 1896's Modern Olympics. Women made their debut in Shot Put in the Olympics of 1948.

Shot Put is played with a heavy spherical object popularly known as **shot**. The aim is to throw the shot-put as far as possible through a pushing action. It requires immense muscular strength and a good balance upon your body. In this tutorial, we will discuss the basic techniques and playing methods of Shot Put.



A Brief History of Shot Put

Historians depict that the first hint of this sport was seen in Scottish Highland during the first century. **Homer**, a great ancient Greek poet and the author of epic poems like **Iliad** and **Odyssey**, had mentioned the competition of throwing stones by the soldiers during the siege of Troy. However, in the middle ages, the glimpse of the modern shot put was noticed when the soldiers started competition by hurling cannonballs.



It was early 19th century, when this sport was actually started to be a part of the local competitions. In 1866, it was played as an event in British Amateur Championship. Now the rules of the shot put are governed by IAAF (International Association of Athletic Association) and WMA (World Masters Athletic).

Participating Countries

Shot Put comes under the track and field job event. Since its introduction to modern Olympics in 1896, the popularity of this sport grew exponentially in different nations. Many Asian and Non-Asian countries have their active participation in this sport. List of some of the major dominating Asian countries include China, Saudi Arabia, Thailand, India, Kazakhstan, Korea etc. In 2014 Asian Games, **Sultan Al-Hebshi of Saudi Arabia** bagged the gold medal in men's category and **Sui Xinmei 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, USA, Poland, Finland, Germany, Canada, etc. are dominating in the competitions. In 2012 Summer Olympics, **Tomasz Majewski of Poland** bagged the gold medal in men's category while **Valerie Adams of New Zealand** bagged gold in women's category.

2. Shot Put – Basics

In this chapter, we will learn the most fundamental aspects of Shot Put throw.

Balance

If proper balance cannot be maintained, it will hamper the final result. A loss of balance can cause deterioration in the acceleration and reduce the application force on the ball.

Proper attention should be given to the following points:

- Centre of mass of the thrower (legs, head, trunk, hip, arms)
- Base of support of the thrower
- Desired direction of travel



Direction

An athlete should understand the path of travel along the circle. It is not important enough to know where your ball is going to land; rather it is important to understand the direction of movement of your body's centre of mass.

Acceleration / Velocity

Instead of sudden acceleration, the implementation should be done smoothly with gradual increase of speed. Starting from a low velocity profile, the acceleration should be increased gradually to have a full-fledged velocity that can throw the ball with such a force that it will be placed in its desired zone. Through gradual practice, it should be mastered. If the velocity or the acceleration will be stretched so much then it may hamper other key elements of the sport.

Rhythm

With the movement of the throwing action, a rhythm should be maintained. The aim is to remain constant irrespective of the speed or acceleration of the throw. It should not change with the increasing or decreasing speed of the throw. Due to stress of competition, the rhythm is often hampered. However, with the use of rhythmic cueing, the movements can be learned quickly and can be used to stabilize the body too.

3. Shot Put – Glide Techniques

Apart from traditional styles, new rotational styles were introduced in the sport due to increasing popularity. Spin method was also introduced later. Glide techniques also became a part of this and soon became quite popular.

Gripping Mechanism

The main thing to master in this is the placement of the grip. First shot should be placed on the upper pad of the hand. Fingers adjustment is another important factor. All fingers should be placed on the shot. It is a general practise to position the shot safely under the chin. Its exact position is at the starting point of jaw and just below the ear.



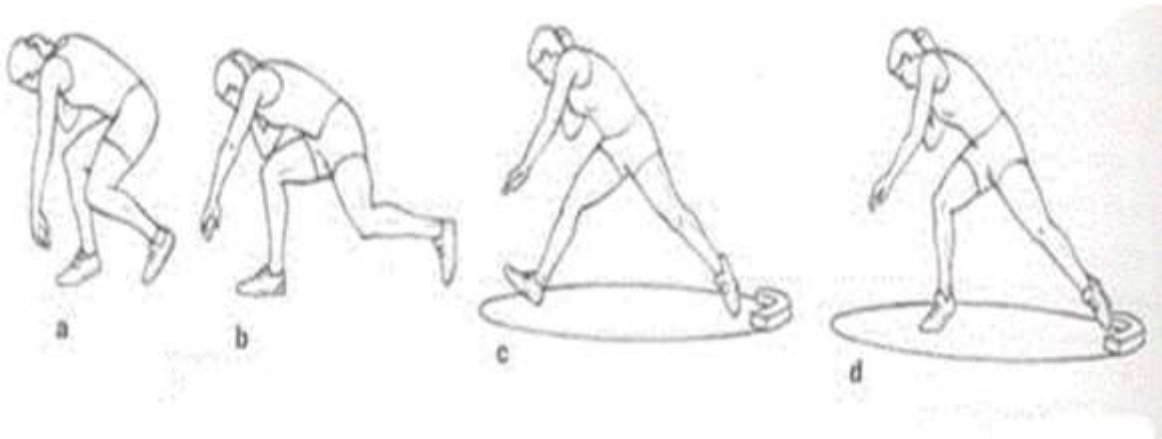
Starting Techniques

There are generally two types of starting techniques that can be implemented. They are:

- Crouch start
- T and Slant T start

Greater stability over the performance can be achieved through **crouch start**. There will also be a consistency in the performance which is a bonus factor. But to practise this type of starting, you need a good strength over your legs. **T and Slant T start** give a good conversion of velocity through mechanical displacement.

In this type of starting method, we actually do the vertical displacement of the body and convert it into the horizontal velocity across the ring. An athlete will require technical consistency for this. Perfect level of timing is also required to execute it flawlessly.

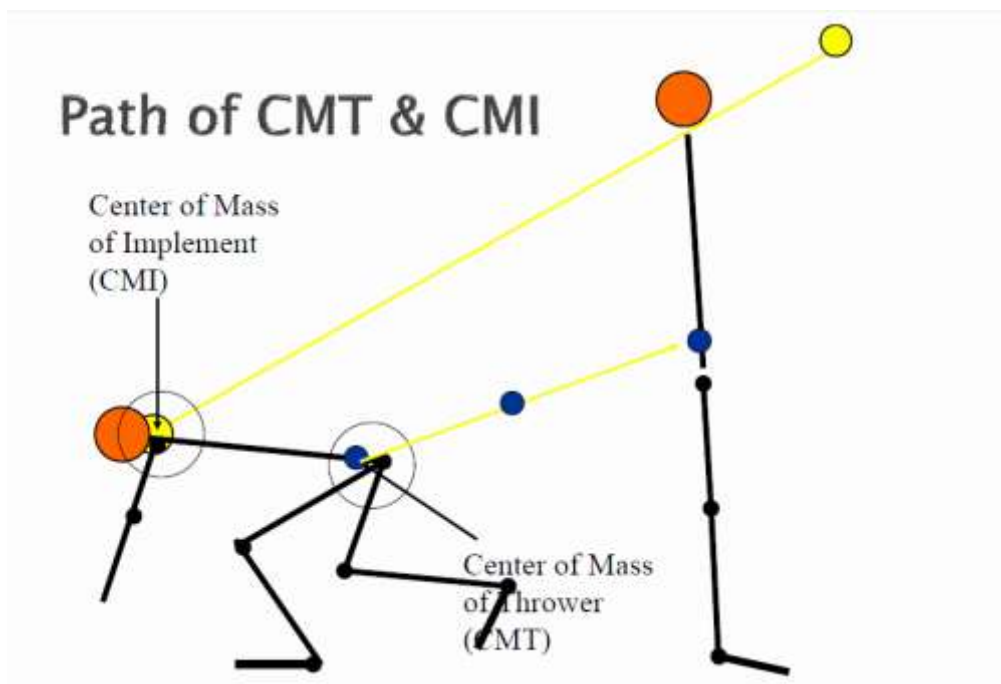


Extension of Leg

To project the ball fully in erect position starting from below, the athlete needs to stretch his leg fully in the corresponding direction and angle. It should be placed at the back side of the circle and if possible should be brought towards the centre of the circle. While extending the extension leg and driving leg, the lower abdomen should make contact with the upper thigh. Let's go through some of the important points about the extension leg.

During the stage of initial single support, an athlete should balance his position and starting movements with the use of free leg. There should be an identical position of flexion between the free leg and the supporting leg. To make the extension leg's target higher, one should lower the Centre of Mass below the stance's support in the backside of the circular region. Free leg extension should be targeted in between a particular range. This is generally from the toe board (0 inches) to 18 inches.

As we do the complete extension of our legs, the hamstrings store the elastic energy. This is useful in the recovery of driving leg at the centre of the circle. At the backside of the circle, the CMT's height determines the height of the free leg extension.



Now let's learn some important aspects about the direction of the extension leg, because this is going to determine the direction of throwing line.

- Extension should be made along with the left sector line.
- Driving the free leg in straight across the circle is another better way of treatment for the extension leg. During this time, your supporting leg's movement should be towards the right side of the circle by going through the central line.
- During each technique, the foot position in the circle keeps varying. However, the axis alignment of the hips and shoulder should remain in line with the foot.
- For a standard alignment, the heel of the foot of the extension leg should be aligned with respect to the left sector line.
- For non-standard alignment, the toe of the extension leg should be aligned with the centre line of the circle.

4. Shot Put – Rotational Style

About Placement and Grip

Shot should be placed on the upper pad of the hand. Fingers should be placed all close to the shot. Positioning of the shot is generally maintained behind the point of the jaw and below the ear by the spinners. This type of positioning of the shot is necessary to counteract the centrifugal force that tries to pull the shot away from the neck of the thrower.



Double Starting Position

The initial positioning in this type of starting method is similar to that of discus throw. Single support phase should be initiated from a viable double support technique. To establish a dynamic support, the CM should be positioned over the base of single support. Position of hip and shoulder is important during this phase. They should remain in horizontal position with respect to each other.

First Single Support Phase

In this case, we have to concentrate upon two aspects very carefully and they are:

- Drive or supporting leg action
- Swing or free leg action

The initiation of the supporting leg is important while the performer lines up in the throwing direction. The leg should be driven off the phase with excessive force. The push off of this drive phase is marked smaller as compared to that of discus techniques.

In case of free leg action, swinging of the leg action should be made in an aggressive and dominant manner in the outset of single support. This means the swinging action should be made once the leg clears the ring. The swinging leg creates an impulse, which in turn creates a force and it is most important factor in rotational style shot put. This also depends upon the movement of torsion and the throw.

Phase of Non-Support

After completing the push offs, the driving leg should be adducted. A thrower should also keep in mind that after the leg swing, it should be actively inverted. In case of no support to aid the rotation of the athlete, shortening of the free arm should be made. Otherwise you can maintain the position that you have achieved at the end of single phase support in case of non-phase support. Now let's discuss about the re-contact second single support phase.

Re-Contact Second Single Support Phase

The axis of the foot should be maintained within the range of 270-315 degree. To reduce the friction, re-contact of the swinging leg is done through a soft turning. This type of move is also helpful in creating a reflex and stretching in case of free leg action. To slow down the upper body, the free arm should move out from the body in a way to maintain the torsion between the shoulder and hip axis.

Second Double Support Phase

Second double support phase is nothing but an initiation of the power position. Let's discuss about some power position difference between the rotational and glide techniques. In the middle of the circle, the technique of power position for both glide and rotational is same. The posture of trunk is less vertical in case glide technique as compared to rotational technique. Various techniques of glide type utilize a broader base whereas in case of rotational techniques, a phase of long drive is used.

Sequence of Delivery

First of all, the position of the torsion should be maintained in between the hip and shoulder axis. Thrower should turn in the direction of the throw. Unwinding of the torsion should take place when the hip axis makes a perpendicular direction with respect to the throwing direction but the position of the implement should not change this time.



Then a final step of jumping should be made. Soon after jumping, as the ball has been lifted above, a slapping action should be followed. The movement of your hand should be behind the shot and try to keep contact with the shot as long as possible.

5. Shot Put – Rules

The rules of the shot put are governed by IAAF (International Association of Athletic Association) and WMA (World Masters Athletic). So let's know about some important rules.

- When an athlete's name is announced, he or she will be having only 60 seconds to commence the throwing motion.
- For safety purpose, the players can tape their fingers but they certainly cannot wear gloves.
- The resting position of the shot is near the neck and it should remain over there throughout the motion.
- With the use of only one hand, the shot should be released above the height of shoulder.
- An athlete can use the perimeter of inside the circle but certainly cannot use the border or outside area of the toe board. Extension of the limbs outside the circle during the throw is allowed.
- The legal sector is 34.92 degree of the throwing area. The shot should be thrown within that range.
- An athlete should leave the circle from back.

Fouls in Shot Put

A throw will be called a **foul** in the following circumstances:

- The athlete does not pause before the throwing action within the circle.
- The athlete is unable to commence the throw within 60 sec of calling his name.
- The athlete holds the shot below the shoulder level or outside its vertical level.
- The athlete is not able to make a continuous contact of the shot with the neck and it slips off.
- If during the throwing the shot touches any of the following
 - Top or ends of the toe board
 - Upper side of the iron ring
 - At any position outside the circle.
- The athlete goes out of the circle before the landing of the shot.
- The athlete does not move from the rear half of the circle.

6. Shot Put – Champions

International Association of Athletics Federation (IAAF) is the governing body of Shot Put. 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 Shot Put:

- Summer Olympics
- World Championship
- Asian Games
- World Indoor Championship
- Commonwealth Games

Shot Put is a sport in which both males and females can take part. Let us now have a brief synopsis on some of the champions of this sport.

Adam Nelson

Adam Nelson is an athlete from America who has specialization in shot put. He is three times Olympics medallist as he has won a gold in 2004 and 2013 and a silver in 2000.

He has won four medals in World Championships which include a gold in 2004 and three silvers, one each in 2001, 2003, and 2007.

Nelson has also won a gold in 2005 and two silvers, one each in 2004 and 2007 in IAAF World Athletics Final.



Tomasz Majewski

Tomasz Majewski is an athlete from Poland who has won many medals in his career. In Olympics, he won a gold in 2008 and another gold in 2012.

In World Championships, he won a silver in 2009. In European Championships, he has won two bronzes, one in 2008 and the other in 2012.

Majeswski won a gold in World Indoor Championships in 2009. He has won two golds and four silvers in European Team Championships, one gold in European Cup Winter Throwing and one gold in Jeux de la Francophonie.



Valerie Adams

Valerie Adams is a shot put thrower from New Zealand who has won many championships in her career.

Valerie won her first medal which was bronze in World Championships and her first gold medal was in 2006 Commonwealth Games. In the Commonwealth Games, she made a throw of 19.66 meters.

At Beijing Olympics, she won a gold by throwing the shot put up to 20.56 meter. In 2016 Olympics, she won a silver medal.

