

# The Long Jump

## How It Works (In A Nut Shell)

Competitors sprint along a runway and jump as far as possible into a sandpit from a wooden take-off board. The distance travelled, from the edge of the board to the closest indentation in the sand to it, is then measured. A foul is committed – and the jump is not measured – if an athlete steps beyond the board. Most championship competitions involve six jumps per competitor, although usually a number of them, those with the shorter marks, are often eliminated after three jumps. If competitors are tied, the athlete with the next best distance is declared the winner.

## The Long Jump Is Split Into 4 Phases

1. **Approach** – The jumper accelerates to a maximum controllable speed.
2. **Take Off** – The jumper generates vertical velocity and minimises the loss of horizontal velocity.
3. **Flight** – The jumper prepares for landing. (3 types = Sail, Hang & Hitch-Kick)
4. **Landing** – The jumper maximises the potential distance of the flight path and minimises the loss of distance at the touchdown.

### 1. Approach

The objective of the approach run is for the athlete to achieve the ideal speed, Rhythm in the approach run is important to ensure the ideal speed is achieved at take off and accuracy in hitting the take off board. It is important the athlete develops a good running rhythm before accuracy is addressed. The length of the run will depend on the athlete's age and speed. When first determining the number of strides in the approach run start by matching the number of stride with the athlete's age. The athlete should be on the balls of the feet as in sprinting with a natural head position, the eyes focused beyond the pit and not at the take off board.

### 2. Take Off

The objective of the take off is to maximise vertical velocity and to minimise the loss in horizontal velocity. Athletes should run fast and off the tail of the board. They should drive the leg quickly through the horizontal position and stop. Athletes should also develop strength on their take off leg so it does not collapse.

### 3. Flight (3 Types)

#### 1. The Stride Jump

In the stride jump style the athlete maintains the take off position for as long as possible and only as the athlete comes into land does the take off leg join the free leg for a good landing position.



#### 2. The Hang Style

On take-off the athlete drops the free leg to the vertical, which is then joined by the take off leg. The arms go overhead to slow down the rotation about the athlete's centre of gravity. The legs are then lifted upwards and forwards whilst lower the trunk. The arms swing past the legs during the landing phase to ensure a good leg shoot.



#### 3. The Hitch-Kick

Following take off the free leg is straightened and swung back and down as the take off leg folds up beneath the hips and comes forward bent. The take off leg then continues forward, straightening for landing. The free leg completes its backward swing behind the hip and then folds up and moves forwards bent, to join the take off leg ready for landing.



## 4. Landing

During the landing, the athlete is aiming to get the heels as far away from the take off board as is possible. The ideal landing position is shown in the diagram opposite where the dotted line represents the projected flight path of the body's centre of gravity. The heels will need to land just before the projected flight path to ensure the athlete does not fall back into the sand. As the feet make contact with the sand, press the heels downwards and contract the hamstrings causing the hips to rise. As the hips rise twist them to one side and allow the forward momentum to carry the body past the landing position.

## Tips In Relation To The Long Jump!

- Hang style and running style are the two most common jumping styles.
- Most men take a run-up of 45-50 metres, and when they hit the take-off board their speed is around 40km per hour - equivalent to top 100 sprinters.
- Women have a slightly shorter run up.
- The pressure on the leg at the time of take-off is approximately 10 times the body weight of the athlete.

## Long Jump Records (Men & Women's) (Olympic & World Records)

### Men's records

World Mike Powell 8.95m (1991)

Olympic Bob Beamon 8.90m(1968)

### Women's records

World Galina Chistyakova 7.52m (1988)

Olympic Jackie Joyner 7.40m (1988)

## More Resources

The Brian Mac Website - Long Jump - [Click Here!](#)

International Association Athletics Federation - Long Jump - [Click Here!](#)

Wikipedia - Long Jump - [Click Here!](#)

