



LONG JUMP



Performance Factors

Strength potential

Maximum velocity

How to interpret space

Mechanics potential

Development potential

Jumping ability

Coordination



Jumping Styles

THE HANG

- After a fast run-up, the athlete drives up powerfully at takeoff. The athlete's leading leg, which is initially flexed and driven upward, is then extended and brought backward to join the take-off leg.
- Both legs, in their extended positions, are thrust to the rear of the body. The arms circle downward, backward, and then upward and forward.

Hitch Kick

- This style is like running in the air for the first half of your flight. The natural forward surge of the non-takeoff leg is like the first “stride” in the air.
- Right left Right or Left right Left.

Sail

- Athlete drives off of the board and immediately the opposite arm meets with the drive arm while thrusting your legs in front simultaneously.

Drills

Continuous A Skip

Alternate A Skip

B Skip

Straight Leg bound

Straight Leg Fast Leg

Skip for Height

Skip For Distance

Continuous Right/Left Leg mini bound

Wall Drills

Knee Pop

Ankling

Punch Drills Single

Continuous Punch Drills

Knee Drive Drills

Punch Over the top Drills

Long jump Preparation walk throughs

Frequency Drills

Push Drills

Transition Drills

Bounding Drills LL/RR

Continuous Right/ Left

LONG JUMP

- A successful long jumper has a unique combination of talents that would make many jumpers successful in a variety of track and field events, such as sprints, hurdles, and the other jumps.
- While there's no substitute for speed, pure speed without control, and a consistent approach, isn't enough.
- That means long jumpers must combine physical gifts with many hours of training to literally rise above the competition.

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Approach

- The length of the approach will vary for each competitor. The goal is to achieve maximum velocity through the board.
- Developing momentum so that your athlete can maximize their speed at take off is the key.



Frontside mechanics

**STAY INSIDE OF THE
IMAGINARY BOX, DON'T ALLOW
THE SHIN TO MOVE OUTSIDE OF
THE IMAGINARY BOX**

HIP FLEXION

KNEE DRIVE

DORSIFLEXION



Why Frontside Mechanics

- The average backside force equals nearly 1000 newtons / about 225 pounds, where as frontside forces equals 2000 newtons or 450 pounds.
- That's nearly 100 percent difference in force production.



Push Phase

- From a standing start, drive forward, keep your head down, with your arms pumping high.
- During this phase the athletes will be moving in a linear direction and the sensation should feel as if they are running up hill.
- Gradually accelerate by applying power behind COM.
- Long powerful strides.



Pushing Drills

- Sled Pulls
- Uphill running
- Resistance bands

Transition Phase

- Begin to lift your head and gradually raise yourself into an upright running posture to start the Transition Phase.
- By the end of the transition phase, you should be in proper sprinting form, keeping your eyes up as you continue to accelerate.



Frequency

- Transition from pushing with long strides to turning your legs over and moving your arms as rapidly as possible.
- It is important to maintain your running stride applying force in a downward motion.



Speed Development

- Flying 30 meter sprints
- 60 meter sprints
- Sprint Float Sprint 20/20/20 30/30/30
- Downhill runs / Overspeed bungee

ATTACK

- The Attack Phase is where all of your efforts goes into sprinting.
- Your body is already upright, your eyes are focused on the horizon.
- Don't look for the board – but you haven't yet begun preparing for takeoff.
- Run hard and light on your feet while maintaining proper, controlled sprinting technique and continue to accelerate through the board.

Check Mark

- If your athlete executes the frequency phase properly. There is no need to teach a penultimate stride. It will happen naturally. (as a result of them striking under their center of gravity).
- Make sure your athlete is not influenced by the board. It is important to maintain constant arm stroke and leg frequency.
- One of the major mistakes that jumpers make towards the last third of their approach is, they shorten their arms as a result of being too close or they over stroke their arms if they are too far away.
- Use mid mark to help gauge how your athlete is progressing throughout their approach. (Usually this mark is about 23 to 28 feet) and for elites it is about 27 to 32 feet)

Mid -Points

- 13 second sprinter 24 feet last 4 stride
- 12.5 second sprinter 25 to feet 26 feet
- 12.0 second sprinter 26 to 26.5 feet
- 11.5 second sprinter 27 feet
- 11.0 sprinter 28 feet to 29 feet
- 10.5 sprinter 30 feet

Penultimate

- You will produce the longest stride.
- Lowering the center of gravity with the minimum loss of momentum.
- Necessary to establish an erect body position for optimal take-off.

Penultimate To TakeOff

Will range from 5 feet to 6 feet 8 inches

13 second 100 meter sprinter will be 5 feet

12 second sprinters will be 5.5

11.5 second sprinter 6 feet

11 second sprinter 6 - 6.5

10.5 second sprinter 6.5 - 7 feet

Take Off

- An athlete's distance is going to be determined by how fast the amount of speed generated horizontally at take off.
- At takeoff, the jumper drives off a fully extended jumping leg and flexes the lead leg with the thigh raised to horizontal.
- The jumper's upper body is perpendicular, the vision is ahead, and the jumper's arm actions compliment those of the legs.
- The angular momentum generated at takeoff is conserved during flight.
- All long jumpers rotate forward at takeoff. It's impossible to avoid because the takeoff foot pushing back at the board causes the jumper's body to rotate in the same direction as the direction of push of the takeoff foot.

Take Off

- Generally, a right-handed long jumper takes off with the right foot.
- Left handed long jumpers takes off with the left foot.
- Athlete will then “Punch” or Drive his or her left or Right up upwards to help with generating vertical lift off of the ground.
- To counteract unwanted forward rotation initiated at takeoff, an elite long jumper rotates the arms and legs in the same direction (i.e. forward) while in the air.



Landing

- Your landing will be determined by how well you execute your push, frequency and take off phase.
- Drills include standing long jump
Knee tucks
V-ups
Hanging knee lifts (FROM A PULL UP BAR).
- Jumping from an elevated take off with focus on executing proper movements.



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