



Simplifying the Long Jump

Boo Schexnayder

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The purpose of the approach in the long jump is to provide horizontal velocity, and our aim is to conserve it throughout takeoff.

A good runner shows a slight undulatory path of the hips in the sagittal plane while running, and a good long jumper modifies this path into a setup and takeoff.

The Approach Run consists of three phases. They are:

1. The Drive Phase, (6 steps), a period of slow rhythm, increasing body angles, and high displacement.
2. The Continuation Phase, a period of upright posture, vertical pushing, and increasing frequency.
3. The Transition Phase (4 steps), a period of preparation for takeoff. The transition phase should resemble the continuation phase, but often problems and changes result as the jumper approaches takeoff.

Technical Features that should be observed in the approach run are:

1. Proper posture, consisting of neutral head and pelvic alignments
2. Progressive body angles through the drive phase, accomplished by using the legs to push the body up into running position.
3. Vertical velocities being generated with each step
4. Relaxation and patient frequency increase, allowing the pelvis to move freely within its postural alignment.

There are several general considerations that apply throughout preparation and takeoff. We will examine these before we discuss setup and takeoff individually. These are:

1. Proper posture, consisting of neutral head and pelvic alignments, and the absence of forward or backwards lean.
2. Conservation of horizontal velocity. The foot contacts should continue to be located underneath the body as to avoid deceleration.
3. Conservation of elastic energy. The athlete should continue to run with great amplitudes of movement in the pelvis and hips to maintain running efficiency.
4. Displacement in the final steps should be maintained. Projection in the jump is proportional to displacement in the final steps, so conservation of effective stride length is crucial.

The final steps of the approach should continue to exhibit good mechanics, notably continuing to display vertical velocities upon the pushoff from each step.

The penultimate step displays these features.

1. Contact underneath or only very slightly in front of the body.
2. A dorsiflexed ankle prior to contact
3. A heel to toe, rolling action of the foot, much like the action of a rocking chair against the floor.
4. Displacement of the body beyond the penultimate foot before the foot leaves the ground. This aids displacement and increases the swing arc of the swing leg, making it more effective.



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The takeoff displays these features.

1. Contact only slightly in front of the body.
2. A dorsiflexed ankle and stiffened quadriceps prior to contact.
3. The initial contact is flatter than that of the penultimate step. A rolling action of the foot, much like the action of a rocking chair against the floor follows.
4. Displacement of the body beyond the takeoff foot before the foot leaves the ground. The lift from the ground should not be seen until the body is over the takeoff foot.

The free leg action off the board should involve flexion of the hip as well as advancement of the hip. The free leg should aid in pelvic alignment, countering the forward rotation induced by the takeoff leg. This can be best described as a swinging movement, rather than a driving movement.

During the initial part of flight, the swing leg should extend and fall as a rotation control tool, regardless of the flight style used.

In the hang technique the limbs are extended in flight to slow rotation. In the hitchkick technique, the limbs are rotated in flight, creating secondary axes to control rotation. Both styles are sufficient in their rotation control capabilities.

Preparation for landing should begin near the peak of flight.

The torso should stay up as landing approaches, and a forward and downward sweep of the arms should accompany the extension of the legs. An upright torso should be maintained at and after impact.

Upon impact, the hips and knees should flex, allowing the butt to come to the heels. Finally, as the butt comes to the heels, the feet should be kicked forward, to allow the butt to land in the hole created by the feet.

The first step in teaching any event is identifying commonalities. These are technical features or skills that must be learned to succeed in the event, as identified by study of great performers and sports science.

Time must be spent in the long jump teaching the run and takeoff. These actions that occur on the ground have the greatest bearing on performance.

Teaching the long jump involves addressing all the skills in a fashion that orders skills from simple to complex. This is done through several teaching progressions that occur simultaneously. They will be described below.



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The approach progression for running skills involves beginning with starting skills (a crouch start, progressing to a rollover and/or block start), progressing to acceleration development work and resisted running (short sprints to teach drive phase mechanics) to speed development work (sprinting to address continuation and transition phase mechanics) and runway rehearsal (actual performance of the approach run, including run management, technical terracing, and checkmark usage). Wall drills are useful in the earliest stages to teach progressions of body angles through vertical pushing.

The progression for preparation, takeoff, and flight skills consists of three fundamental drills. These are power skipping (for height and distance, featuring foot contact patterns and blocking the swing leg below a parallel position to the runway), Run-Run-Jump (repeated takeoffs featuring the penultimate setup and foot contacts), and Hurdle Jumps (a vertical, galloping action over hurdles stressing arm and free leg actions in flight). Each drill finishes with a takeoff and running in the air as the athlete reaches the end of the runway.

The specific technical progression for unique skills includes the fundamental drills above. It progresses to actual long jumps with a running in the air and through the sand landing, and concludes with actual long jumps. These jumps are from runs of 4-12 steps.

The landing progression for landing skills starts with gymnastic standing long jumps (standing long jumps with the athlete landing in a balanced upright position, arms in front) to the same with a squat (to teach the absorption component), to the previous two skills followed by a kickout (a simultaneous roll onto the buttocks and kicking action of the legs, to develop the clearing of the feet so that the buttocks may land in the mark made by the feet), to standing long jumps and running long jumps with actual complete landings.