

Intro to High Jump

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Safety in the High Jump



- Landing pits meet size requirements
- Pads and top cover should be properly tightly fastened together
- Make sure pads don't move or touch standards
- Athletes should wear proper footwear (Heal Spikes)

Styles of High Jump

- Scissor Kick
- Western Roll

Fosbury Flop



Dick Fosbury in the high jump at the 1968 Olympic Games in Mexico City (AFP / Getty Images) © Copyright

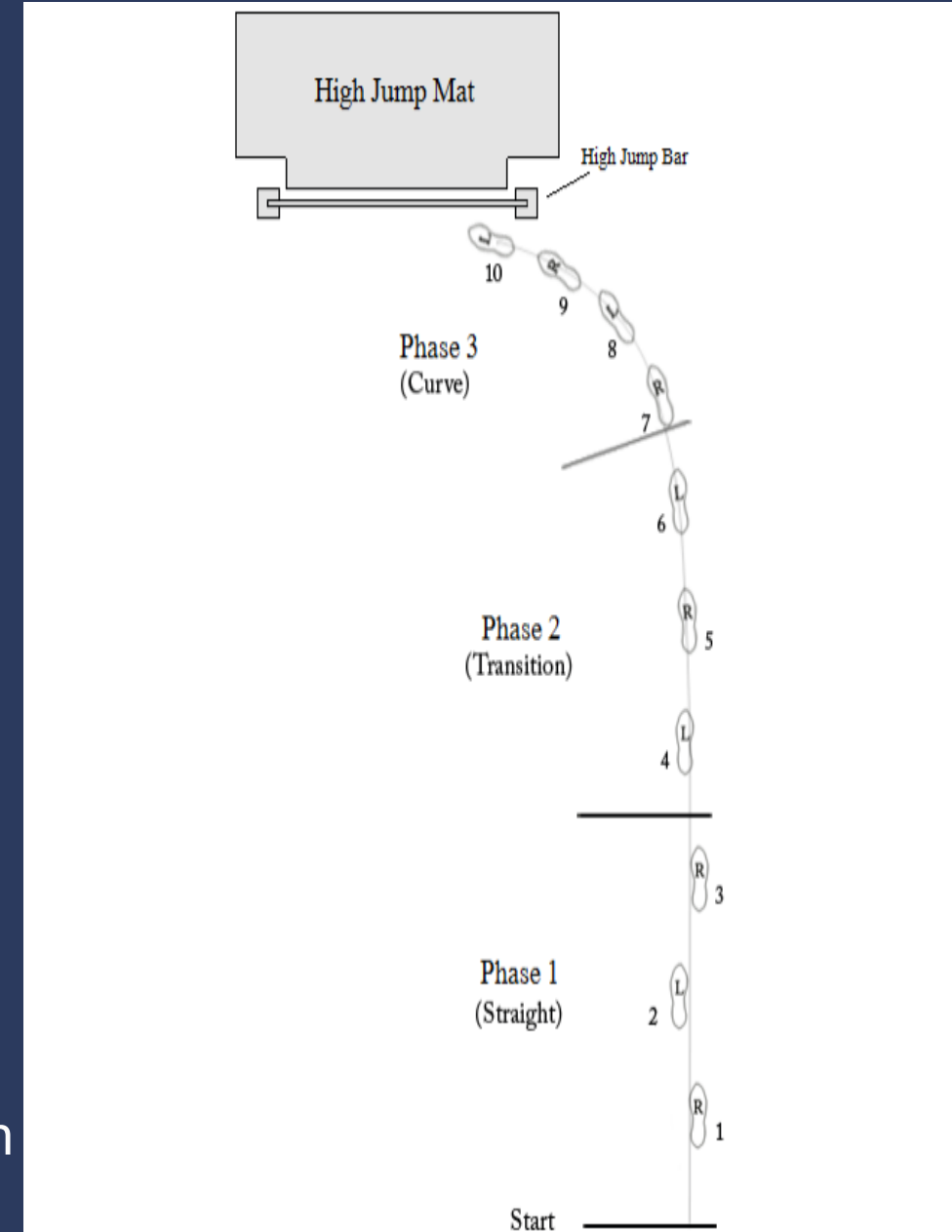
The Approach



- Straight to Curve Approach
 - Creates additional Forces (Centripetal Force)
 - This Tangential force propels the jumper toward the crossbar, eliminating need to jump at the bar
 - Approach determines 95% of the jump
 - Transition from Straight to Curve
 - Smooth, without excessive acceleration/deceleration/cutting/ or forward lean

Curve Running

- Body Lean
 - Inward
 - Push out from feet
- Arms
 - Balance and counter the actions of the legs
 - Do not over emphasize (let it be natural)
- Feet
 - Each step should touchdown on curve
 - Foot axis at touchdown should follow curve
- Hips
 - Should maintain hip oscillation through turn



Visual Focus



- Visual
 - Focus on second check mark during approach
 - Shift visual to near standard to gauge the take-off point
 - Shift prior to initiating the curve
 - Middle of the Curve
 - Shift visual toward the intersection of far standard and the cross bar
 - Provides a target to gauge inward lean
 - provide crossbar location

Finding Approach

- Steps
 - 8 step/10 Step/12 Step
- Width
 - 10 to 16 feet Wide
 - Stronger Faster = wider turn radius
 - Reference point to start curve 13 feet plus width (Radius plus bar length)
- Length
 - Optimal length determined by strength and ability level
 - General Rule- Take curve point and run back from
 - 3 steps/5 steps/7 steps
 - Watch from multiple angles- Watch for bio-motor errors and adjust according
 - Lean, arm action, body posture



Penultimate step



- Preparation for Take-off
 - Avoid deceleration onto take off foot
 - Push through (move over the foot)
 - Sets up strong swing leg (drive knee)
 - Most errors occur here
 - Deceleration leads to poor postural integrity
 - Should be drills often, if not daily (in warm-ups)
 - Keep in line with curve running foot at impact
- Example

Take Off

- Two goals
 - Create Vertical Lift
 - Set-up rotation
- Take-off Point
 - Varies from jumper to jumper
 - Higher level jumpers take off from farther away



Flight Mechanics

- Goal
 - Accelerate rotation around the bar
 - Result from forces on the ground
 - Allow center of mass to travel under the bar
- Rotation
 - Lies back
 - Extends hips slightly into a slight arch
 - Knees should be flexed and apart in flight
 - Keeping free leg (drive knee) up in flight is key
 - Inflight arms return to the side so hands are near hips
 - Do not over reach
 - Causes to feet to come under the bar
 - Finally head comes to chest to bring legs over the bar



Drill Progression



- Goals
 - Develop maximal, controlled vertical and horizontal take offs
 - Create the necessary vertical component at take-off to achieve the optimal takeoff angle while minimizing a loss of horizontal velocity
 - Achieve Flight Mechanics that create a somersault rotation and optimize a flight parabola over the bar
- Develop
 - Approach
 - Take-off
 - Flight
 - Landing

Approach Drills



- Circle Runs
 - Lay cones out in a circle with a diameter of 30-50 feet across
 - Performed running with body lean into the curve with good maximal sprint mechanics
 - Maintain posture with inward lean and neutral head, spine, and hip alignments
- Oval Runs
 - Progression after circle runs
 - Use a 15-25 foot radius that leads into about a 75 foot straight
 - Develops the smooth transition from straight to curve
- Rhythm Runs
 - Run approaches at 70-80% of full speed using the same rhythm of a full approach.



Penultimate Drills

- Run Run Jump (added to warm-ups)
 - Over 40-50 repeat run run Jump
 - Can be done down the horizontal runway into sand
 - Can be done on curve into high jump mat
 - Also can alternate take off legs
- 3 Step run over Hurdles
 - 3-5 Hurdles set 7 Meters apart (23feet), or distance based on level to allow 3 step rhythm between hurdles
 - Always land on free leg (drive knee)
- Basic Power Skips for Height
 - Heel toe take off cue



Take off Drills

- 3 Step Hurdle runs
 - Place hurdles 5 meters (16'5") apart on a curve
 - Use 6 in to 12 in hurdles
 - Run with high knees and jump over the hurdle
- Scissor Drill
 - 4 to 6 steps
 - Take off and scissor over a bar at sub-max height
 - Practices free leg swing and take position
- Hurdle drills straight to curve
 - Place 5 meters (16'5") apart move from straight to curve
 - Must be high enough to increase vertical component (24"-36")
- Mini Hurdle take offs
 - Place hurdles 5m (16'5") apart run, run jump over each hurdle

Flight Drills



- Back Overs
 - This can be preformed on the ground or standing with a box
 - Stand on both feet with back to the bar
 - Jump straight up and rotate over the bar, arch back, just before landing on the mat tuck the chin
- Back flip to stomach
 - Use only with more advanced athletes
- Bridges
 - Lie on mat or ground
 - With feet and shoulders on the ground press the hips up
 - Shoulders stay on the mat/ground, feet stay planted
- Back Lay out
 - Back over with speed
 - Run at the mat jump with two feet and back turned toward the mat

Bio-Motor development



- RUN! RUN! RUN!
 - Before you can jump you must learn to run!
- Develop these components
 - Power
 - Speed
 - Flexibility
 - Strength
 - Mobility



QUESTIONS ?

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