Training Design for Horizontal Jumps: Putting the Pieces Together

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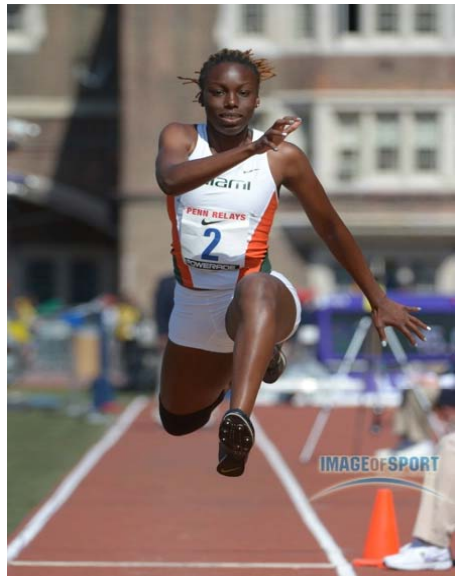

Coaching Background

- Sam Houston State (jumps) 1999-2004
- UTEP (jumps/multi's) 2004-2008
- Miami (jumps/multi's) 2008-2012
- Louisiana Tech (sprints/jumps) current

Acknowledgment and Thanks

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- Athletes I have coached

Demands of the Event

- Before you can develop a training plan, you must first know and understand what are the demands of the event in question.

- Some Demands carry over, some are specific to a particular event

- Develop a base of event specific qualities

What Are the Demands of Horizontal Jumping: The Pieces of the Puzzle

- Strength
- Speed
- Coordination (includes flexibility)
- Jump Endurance

Train the Athlete First, The Event Second

Strength

- General Strength (circuits, med ball work, core strengthening)
- Absolute Strength (olympic lifts, pressing movements & stabilization)
- Power (Olympic lifts, complex and combination lifts, plyometrics)
- Elastic (ballistic lifts, plyometrics)

Speed

Many different sub sets of speed, but we will focus on 4

- Acceleration (short sprints, ladder)
- Max Velocity (sprints of 6-8 sec. of all out sprinting, wicket drills)
- Speed Endurance (sprint-float-sprint)
- Optimal Speed (run way rehearsal, rhythm runs)

Coordination

- Mobility/Flexibility (dynamic, hurdle mobility)
- Agility (lateral movement exercises)
- Balance (line walks and runs)
- Technique Work (sprints, short run jumps)

Jump Endurance

- Plyometrics (Multi-Jumps)
- Short Approach Jumping (3-12 steps)
- Approach Work w/take-off

Putting the Pieces Together

- How do we combine these abilities to make the complete jumper???

The Glue

- Volume, Intensity, Density & Restoration

- Manipulation of these factors are how we put the pieces together

The Glue

- Volume – The amount of work done in a given day, week, month or year
- Intensity – How difficult or how hard we will attack a specific training aspects. Nature of some, more taxing than others
- Density – Frequency in which we will address a given training aspect
- Restoration – Recovery time between any given bout of work

Weekly Training Set-up (Off-Season)

- **Monday**

  Continuous Warm-up
  Acceleration Dev. – 5 x 20m, 3 x 30,
  Multi Jumps
  Lifting
  Multi Throws
  Cool down and stretch

- **Tuesday**

  Jump Warm-up
  Technique Work – Curb Drill, 3-5 step take-off
  GS – Full Body Circuit
  Cool down and stretch

Weekly Training Set-up (Off-Season)

- **Wednesday**
  - Sprint Warm-up
  - Approach Development – 4-6 Runs from zero (on the track)
  - Light Tech Work???
  - Lifting

- **Thursday**
  - Continuous Warm-up
  - Active Recovery work
  - Core strengthening

- **Friday**
  - Continuous Warm-up
  - Acceleration Development – Resisted runs (sleds, tires) 6-8 x 20meters
  - Multi Jumps
  - Lifting
  - Multi Throws
  - Cool down and stretch

Weekly Training Set-up (In-Season)

- **Monday**

  Sprint Warm-up
  Acceleration Development – 3 x 30, 3 x flying 30
  Multi Jumps
  Lifting
  Multi Throws
  Cool down and stretch

- **Tuesday**

  Jump Warm-up
  Technique Work – Short Approach Jumps (4-12 steps)
  GS – Med Ball circuit
  Cool down and stretch

Weekly Training Set-up (In-Season)

- **Wednesday**
  - Sprint Warm-up
  - Runway Rehearsal – 4-6 Full approaches w/take-off
  - Max Velocity Work – 2 x Sprint-Float-Sprint
  - Multi-Jump
  - Lifting

- **Thursday**
  - Off day or very light active recovery

- **Friday**
  - Pre-Meet Warm-up
  - Light Event Specific Work

Incorporating the Technical Aspect – Long Jump

- Approach Development
- Take-off management
- In-Flight Mechanics
- Landing Efficiency

Approach Development

- The most single important aspect of the entire event.
    - Focus on what happens on the ground

- Focus on Rhythm, Accuracy and Postures
    - Break into phases early on
        - » Acceleration – first 6 steps
            - Roll-over vs. crouch
        - » Continuation – Middle of run
        - » Take-off Prep – last 4-5 steps

The Approach

Take-Off Management

- The Penultimate Mechanics – Cue a “flat-flat” step to aid in and minimize lowering of center gravity at the same time
- Posture and leg stiffness are the key to proper execution of the last two strides.
- Very natural skill, can become a deterrent if overly coached

Gravity Does Not Need Our Help

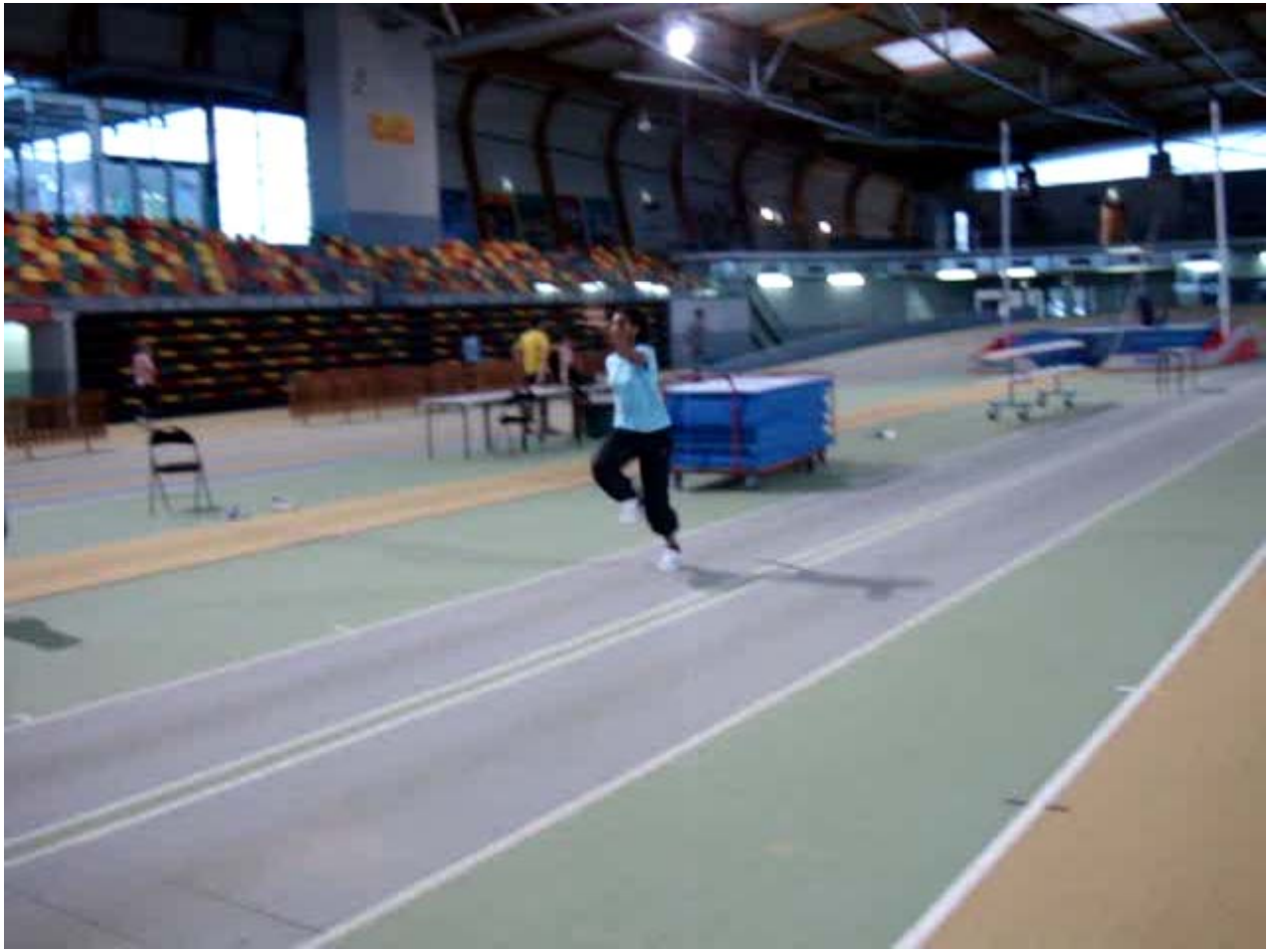
- Excessive lowering of center gravity is not necessary. Try to minimize loss of horizontal velocity while still gaining the required vertical take-off velocities and angles.
- Avoid Slack
    - Curb Drill
    - Run, Run Jumps

Curb Drill

In-Flight Mechanics

- Least important of technical demands. As long as landing positions are not compromised, would not spend a lot time coaching this portion.

- 90% of coaching in this phase is spent on teaching proper arm action and separation of arm at take-off.



Landing Efficiency

- Key here is to remember not to lose anything. We teach a kick out landing most of time but any landing that is safe and does not lose inches will work.
    - Kick out
    - Side Roll

Kick Out Landing

- Goal is to try to replace the heels with the backside as you kick out the feet

Incorporating the Technical Aspect – Triple Jump

- Approach Development
- Take-off Management
- Posture and the Role of the Free Leg

The Approach

- Most aspect that we discussed in long jump will carry over to the triple jump approach.

- Posture and Rhythm remain a focus, one difference is the importance of the “getting the knees down” in the last 4 to 5 strides

Take-Off Management

- This is where most jumps will go wrong. Always work back when problem solving in the jumps
- Usually double arm with men and single arm with most women
- No need for a penultimate step as we want jumpers to “run off the board”

Take-Off - Don’t Let’em See it Coming

Posture and Free Leg Mechanics

- Posture may not be the sexiest thing to coach but is so critical to success in horizontal jumps, especially triple jump, where conservation of horizontal speed is crucial!

- Proper use of the free leg and swinging segments can contribute greatly to proper posture in all phases.

Free Leg Mechanics

Contact Information

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