



HIGH JUMP

COACHING A COMPLETE ATHLETE



Taos High School

- *8 State Team Titles
(Boys and Girls)
- *8 Individual HJ Titles
- *Numerous Sepulveda HJ
Champions
- * New Balance All American
(EE)
- *Boys and Girls School Records



DI Collegiate Career

- *6 X Conference Champion
- *2008 Conference Indoor Athlete of the Year
- *2008 NCAA DI National Qualifier
- *Heptathlon School Record Holder
- *Former Conference Hep. Record Holder



ERNEST MARTINEZ

HEAD GIRLS TRACK AND FIELD COACH (LOS ALAMOS, NM)

EVAROSMARTINEZ@GMAIL.COM

Event Breakdown

- * High Jump Components

- A. Physical

- B. Technical

- C. Mental

- * Although the physical component will be covered briefly, the technical and mental aspects will be **highlighted**

- **PREVALENCE OF RESOURCES FOR IN DEPTH PHYSICAL COMPONENT**



YouTube
Google
Clinics
Other Coaches
Divine Intervention :)

**All three areas work together, but
true mental and technical
proficiency are often overlooked at
the high school level**

PHYSICAL COMPONENT

****CREATING AN ATHLETE VS FINDING ONE?****

WHAT TO LOOK FOR: (IDEALS)

* OBVIOUS

- A. TALL, LONG LEVERS, POWERFUL, NATURAL JUMPING ABILITY, FIT
- B. BASKETBALL, VOLLEYBALL PLAYERS, PHYSICAL SPECIMENS

* UNDERRATED

- A. COORDINATED, GOOD BODY AWARENESS, FLEXIBLE
- B. WANTS TO DO IT!!



Athletes come in all shapes, sizes, and abilities.

Your job is to mold them and create a better athlete.

Physical Requirements of a High Jumper

- * **Strength:** Raw power, ability to exert force, explosive
- * **Dynamic Movement:** Coordination, body awareness, “snappy”
- * **Flexibility:** Ability to perform movements, specific to HJ (back, hips, ankles, injury prevention)
- * **Sprint Mechanics:** Efficient runner (form), foot/ground contact, being fast
- * **Endurance:** Handle the rigors of practice, strength endurance, jump endurance (ability to execute multiple attempts at peak form)

PITFALLS!

- * **Athletes coming out late and not having base (winter sport, injury, etc)**
- * **Not having access to proper equipment, facilities, or poor weather conditions**
- * **Lack of coaching to implement desired strategies**

TECHNICAL COMPONENT

****PHILOSOPHY: NOT ONLY KNOWING WHAT TO SAY, BUT WHEN TO SAY IT****



Being sound in all three phases:

- * **Approach**
- * **Take-off/Plant**
- * **3rd Phase/“Flight”**



Must build from one phase to the next!!!!!!

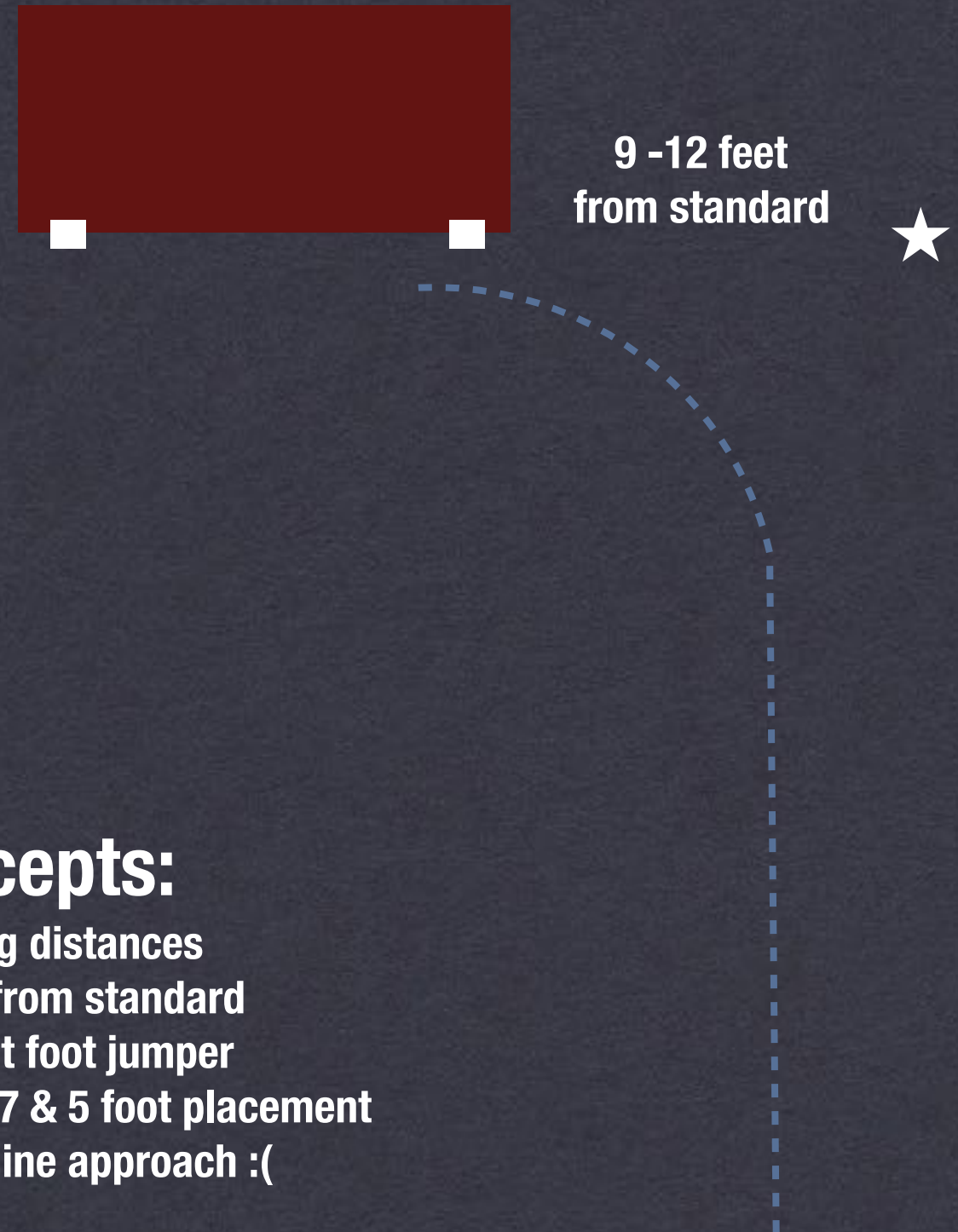
High jump errors are often times misdiagnosed.

It can be easy for an untrained eye to label a problem as a 3rd phase or take-off problem, but is in fact an approach deficiency.

APPROACH SET-UP:

Varies with athlete, body type, ability, speed, strength, and also between girls and boys

HJ approaches generally range anywhere between 8 and 12 steps, but most common is the 10-step approach



Concepts:

Estimating distances

Measuring from standard

Left vs right foot jumper

3 & 5, 5 & 5, 6 & 4, 7 & 5 foot placement

C run, direct line approach :(

APPROACH:

The Straight (5 & 5 approach)

- * 1st 5 steps of approach are on the straight
- * Build the horizontal momentum that you will carry through the curve (drive out of the back)
- * Consistent, rhythmic, controlled, “bouncy”
- * Shoulders square with direction of travel

Common Errors:

- *Sprinting immediately
- *Hunched, forced posture
- *Small, variable steps

The Curve (5 & 5 approach)

- * 2nd 5 steps need to be ran “on the curve” (feet pointed in the direction of travel)
- * Right radius = appropriate outward pressure and inward lean (bend at the ankles)
- * Running the curve/inward lean creates the necessary forces that will be utilized later
- * Tighter curves facilitate larger **tangential** forces, but must be appropriate for your athlete.
- * Faster/advanced athletes can successfully keep pressure on a larger radius. (hard to sustain speed with tighter curve)
- * Slower/beginner athletes cannot generate necessary forces with large radius (end result is a direct run to the bar with loss of outward pressure)

Common Errors:

- *Stepping out (entrance and penultimate) which results in larger radius, direct path, release of pressure
- *Slowing through curve (standing, loss of inward lean)
- *Elongated last step (reach and dip)

Approach Specific Drills

- ✱ Full Run-Throughs (no jump)

- A. Rhythm lock-in
- B. Develop consistency

- ✱ Full Run Scissors

- A. Adds on to Full Run-Throughs
- B. Allows athlete ability to simulate/feel last steps into the Take-Off

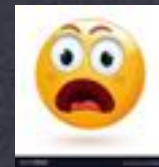
- ✱ Circle Drills (develop proficiency with curve running)

- A. Simple Zero's
- B. Zero's
- C. Zero w/knee drive
- D. Figure 8's
- E. Figure 8's w/knee drive

- ✱ MVR's (acceleration)

- ✱ Wickets/cone drills (sprint mechanics)

TAKE OFF/PLANT:



Widely viewed as the most crucial phase of the jump

PENULTIMATE STEP

- * Second to last step
- * Longer step resulting in lowering of the hips
- * Important to maintain horizontal velocity!

FINAL FOOT PLACEMENT

- * Varies with athlete (generic rule is arm-out/arm-in) Advanced = more specific
- * Like the approach, take off foot will be placed in the direction of travel
- * Final step is in contrast to the penultimate —————> **SHORT!**
- * Final position should be flat footed, straight legged, toe pointed towards the crossbar
- * Posture at plant should be linear, tall (transition from inward lean to vertical lift)
- * **EXERT FORCE INTO THE GROUND!**



TAKE OFF/PLANT:

Common Errors

- * Turning foot parallel/out prematurely (getting on your back early)
- * Squatting to “jump”(long/reaching last step)
- * Purposely jumping into the mat (arm, head, or body)
- * Slowing at take-off
- * Incorrect take-off position (normally too close)

APPROACH SPECIFIC DRILLS

- * **Take-off Matrix** (Circle drill variations)
 - A. Rocky Walkies, Rocky Walkies w/ skip
 - B. Vertical Skips w full leg extension (alternate and same leg)
- * **Short approach runs** (4 and 6 step)
- * **Plyometrics** (Minimize ground contact and maximize force applied)
 - A. Rebound jumps
 - B. Multi-jump circuits
 - C. Bounding
- * **Half squats** (flexion in takeoff leg is limited, greater force can be trained with half squat vs 3/4 and full)
- * **Step-ups** (weighted, unweighted, and olympic)

FLIGHT:

* MUCH OF OUTCOME IS PREDETERMINED, BUT
HOPEFULLY WE HAVE ARRIVED TO THIS POINT
TECHNICALLY SOUND AND IN A POSITION TO SUCCEED

KEY CONCEPTS

- * Take off leg at FULL EXTENSION
- * Initiating of lateral rotation
- * Shortening of the body to aid lateral rotation (frog legs, slightly hyperextended hips, toes out, etc)
- * Correct Arch (hips & knee relationship)
 1. Timing (not premature)
 2. Placement (heels not hooked)
- * Patience, Patience, Patience
- * Spatial awareness (between body and bar)
- * Clearance of feet

FLIGHT:

Common Errors

- * Dropping knee to achieve hip thrust
- * Overarching (heel hook)
- * Vertical torso (lack of lateral rotation)
- * Remaining “long” (slows rotation and increase bar time)
- * Impatience on top (kick and drop)
- * Bar proximity (usually too close)



VS

APPROACH SPECIFIC DRILLS

- * Back Overs (normal and off box)
- * Bridges (feel and flexibility)
- * Weighted hip thrusts
- * Back Flips (in jump/layout position, NOT tucks)
- * Box Jumps (varied step approaches)



BEING A TECHNICIAN

****NOT ONLY YOUR KNOWLEDGE, BUT KNOWING WHEN/HOW TO DELIVER IT****



- * **REGURGITATION OF INFORMATION**
- * **EXCESSIVE TALKING POINTS/KEYWORDS**
- * **MEET OR PRACTICE = SPECIFIC TASK IDENTIFICATION**
- * **DEMONSTRATED PROFICIENCY EMPHASIS**
- * **HABIT/REPEATABILITY BUILDING BLOCKS**

MENTAL COMPONENT

HIGH JUMP AS A CHALLENGE OF FAILURE

- * VERTICAL JUMPS ALWAYS END IN “FAILURE”
- * ATHLETES HAVE EXCESSIVE ACCESS TO THE COMPLETE SCOPE OF THEIR EVENT
- * INCORRECT MEET/PRACTICE STRUCTURE CAN BE EXTREMELY DETRIMENTAL

- **Mental Blocks**

Psyched out/lack of confidence at certain heights

Fear of regression

Confusion

Cannot get off the ground

- **Plateaus**

Training does not promote growth

Lack of physical/technical gains

Portrayal that athlete is at their “limit”

- **Complacency**

Known outcome/lack of motivation

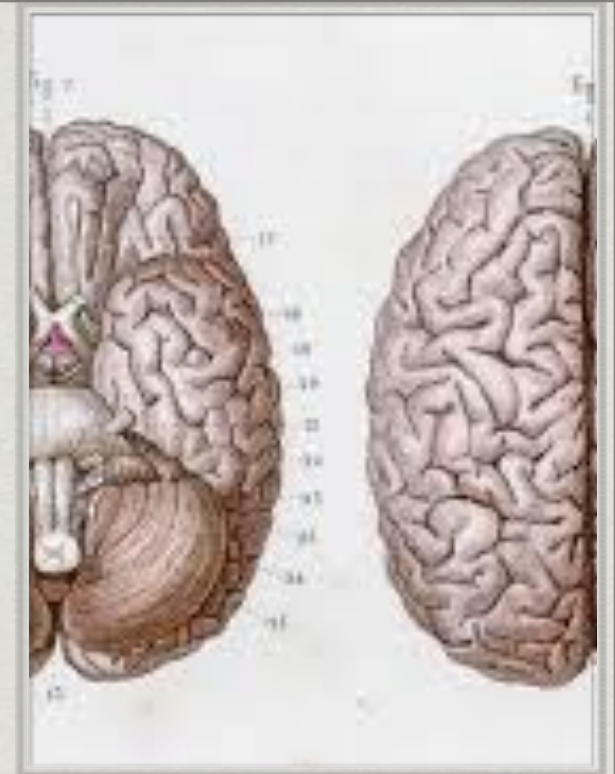
Meets feel like practices, championship meets feel like early season meets

- **Injury and Overuse**

Overtraining certain muscle groups

Fixation on particular bar clearance, resulting in overexertion

Emphasis on wrong concepts

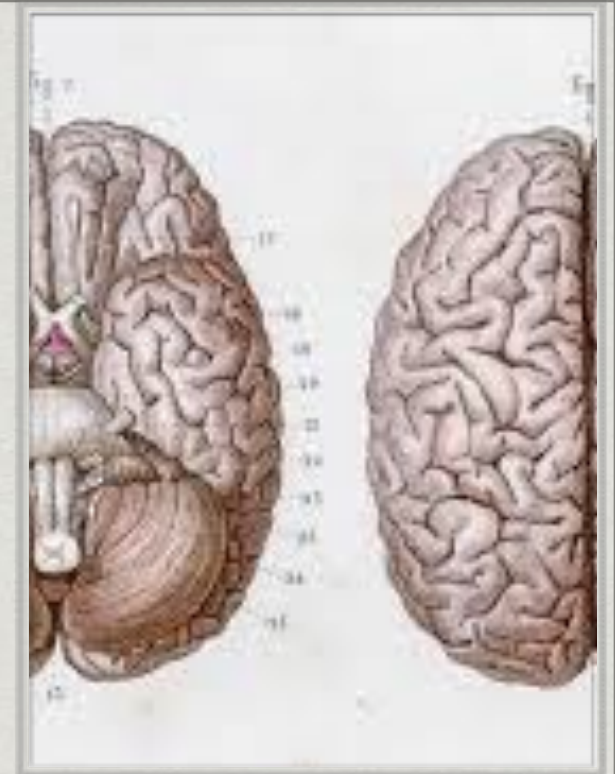


MENTAL COMPONENT

Setting your HJ program up for success

- **Growth/improvement based ideology VS results based ideology**
- **Mentally center your athletes with clear, appropriately designed meet/practice objectives**
- **Know your athletes**(body language, strengths, weaknesses, stressors, motivators)
- **High level of Attention/Support —————> Independence**
- **Prepare your athlete MENTALLY!**

Bad weather, long/short wait, jumping right after 400 as prep for state, 3rd attempt jumps, high opening bars, equipment management, warm-up time, jumping clean, start marks, coach not there, mark blows away, etc.



Athletes are predisposed to gauge results strictly on PR's

SESSION EXAMPLES:

#1

Goal: Meet “Clean” Jumping

Athlete enters meet as a 5’2” jumper, but she will be instructed to focus on jumping 4’8”, 4’10”, 5’0” without a miss. Results after 5’0” are less important or “extra”. If she completes task, but does not clear a PR, she still feels highly successful. If she is unable to jump clean, it is a teaching moment and allows for specific practice task the following week.

Benefits: Refreshes focus, limits dependence on pr’s, allows us to work on championship tactics.

#3

Goal: Volume jumps

Athletes have bars placed 1-3 bars placed below their current season best (moderately challenging, but you know they will clear). The goal for the session is to clear that bar 3 out of 5 times, 5 out of 8 times, or 5 times regardless of tries.

There will not be much excitement at first, but a task-completion mindset takes over. Athletes are able to work on deficiencies instead of wanting to move the bar up, or clearing higher.

Benefits: Leave feeling accomplished, “lock in” run or approach, refreshes focus, lessen focus on pr’s.

Emphasis on specific task & mental component as opposed to PR’s/jumping “high”

#2

Goal: Increasing opening height

Athlete has cleared 6’6”, but is unable to break through. He normally opens at 5’8” and jumps through 6 bars before having attempts at his PR. Training emphasis is on feeling comfortable with an opening height of 6’.

Athlete does full event specific warm up and is given 1-2 attempts at height. If unsuccessful, he must wait 45 minutes, 1 hour, or following day to try again.

Benefits: Allows athlete to be increasingly fresh at quality bars, enhances initial focus and proper event warm up, teaches precision and efficiency, allows us to work on championship tactics.