

Non-Technical Approach to Training the Long Hurdler:

Faster = Better

Presented by

Nick Buckvar

Ladue High School, St. Louis, MO

St. Louis Lightning Track Club

Long Hurdle Rules

- **Rule 1:** Make the athlete as fast as possible for 200m & 400m
- **Rule 2:** Teach the athlete to alternate lead legs
- **Rule 3:** Teach the athlete to run the race backwards-never lose speed over the hurdle
 - Each hurdle is an opportunity to gap the other runners: hurdle is NOT a barrier
- **Rule 4:** When in doubt, refer back to Rule 1.

Jerrick Powell

EVENT	2013: Soph.	2014: JR	2015: SR.
200m	23.65 FAT open	22.28 FAT open	21.89 FAT open
400m	49.50 (split)	48.50 (split)	48.90 FAT open
300IH	40.28 FAT	38.88 FAT	39.02* FAT only race

Jehu Chesson II

EVENT	2009: Fr.	2010: Soph	2011: JR	2012: SR
200m	23.69 FAT open	23.25 FAT open	21.80 (split)	21.86 FAT
400m	52.47 FAT open	51.50 (split)	50.3 (split)	N/A
300IH	42.68 FAT	39.44 FAT	37.44 FAT (110h: 14.15 FAT)	37.77 FAT (110h: 14.43 FAT)

Shae Grant

EVENT	2012: JR	2013: SR
200m	27.04 FAT open	24.0 (split)
400m	60.54 FAT open	55.5 (1 st leg split)
300IH	46.15 FAT (400h: 63.90 FAT)	42.95 FAT (400h: 58.91 FAT)
100h	17.90 FAT	14.27 FAT

Don't try to re-invent the wheel

Use a Training program that...

- Based on the principles of progressive loading
- Has produced used for athletes of every level and ability
- Takes a logistical approach to training
- Simple to follow and implement
- Has been tested, tweaked for years
- WORKS!
- *Apply hurdle principles WITHIN the plan, not in ADDITION to the plan.*

Core Principles of Training

- Most high school athletes are not pure sprinters, pure jumpers, pure hurdlers- must create versatility
- Understand the actual training age of the athlete
- Sequencing of Energy Systems is key
- Know WHY you do what you do
- Always be ready to make adjustments
- Trust your Gut

Energy Systems and Technique

- In order to get faster, the athlete must expand the energy systems used during each event
- The athlete must also make gains in running efficiency through the use of proper technique
- The long hurdler needs good hurdle technique, but not excellent. **Make them as fast as possible for 300m**

Basic Sprint Training Lingo and Terms

- **Speed Endurance**- ability maintain *near* max velocity
- **Lactic Tolerance**- AKA Lactic Threshold; the ability to buffer the acid build up in muscle tissue due to high level physical activity (time & intensity dependent)
 - even tougher when asking to hurdle (end of a 400)

Defining the Events:

What are the demands of the events we prepare for?

- **200m** dash requires ATP/CP systems: **Speed Development of Acceleration & Max Velocity**. Critical in **Speed Endurance**
- **Where does 300m fit?** **Because of this, it is often challenging to design an effective training program **ATP/CP, Speed Endurance, Lactate Tolerance, some Extensive Tempo**
- **400m** dash, best defined as a controlled sprint. Athlete will cycle through several energy systems. **ATP/CP, Speed Endurance, Lactate Tolerance, Extensive Tempo**

300m: A Unique Distance

- Anaerobic Lactic: (Glycolytic) 80-90%+ efforts (150m-320m)
 - **40 Second Rule:** Effects of lactic build up occurs around 40 seconds @ high intensity
 - If we emphasize training for 100/110h, neglect 2/3 of the 300IH race: Long Speed Endurance & Lactic Threshold.
- 200m: speed development
- 400m: speed endurance, ability to lose as little velocity over hurdles (particularly at the end of the race)

Common Mistakes with Hurdle Programming

- Too much emphasis (time) placed on the technical elements of hurdling
- Assuming an athlete is a 300IH **AND** 110HH
- “regular” intervals/workouts run with hurdles & no considerations (placement, spacing, height)
- Not enough emphasis placed on Anaerobic (Glycolytic) training. Lose workouts for hurdling
 - Easiest area to make substantial & impactful gains
 - Effects of Lactic Build up limits muscle’s ability to work = even tougher when asking to hurdle (end of a 400)

ESSENTIAL SKILLS

- Great Sprint Mechanics
- Ability to alternate lead legs

Run before we hurdle...

- **Must learn & master proper sprint mechanics:** unnatural or poor technique never lead to optimal speed or high level of performance.
 - over-striding
 - short choppy strides
 - Limited heel recovery
 - Rotation of shoulders & upper body

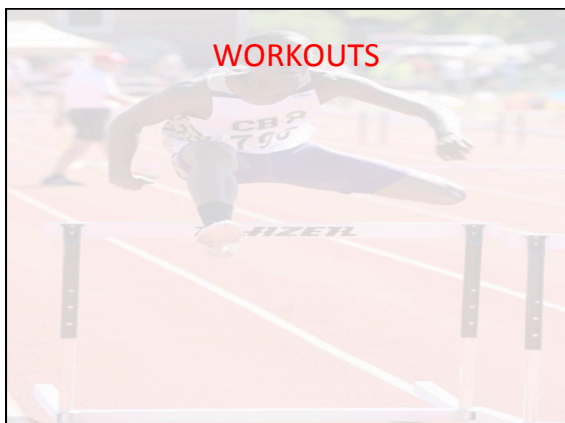
Rule 3: Long hurdler must be able to alternate

- When racing, cannot lose speed by stuttering. “Keep the speed & be ugly over the hurdle.”
- Must build confidence in both legs
 - Drills on both legs equally
- Never use terms “good leg” “bad leg”

Every Day Drills (EDD's)

- Conducted with a real hurdle
- Count hurdle clearances: fatigue = injuries
 - Stretching the lead leg
- Considerations.....
 - Hurdler needs to hurdle... everyday?
Experience level
 - Hurdle mobility subs for EDD's on non-hurdle workout days
 - Hurdle workout focus? Heavier sets and reps

DRILL	QUEUE	SETS & REPS
Lead Leg Wall	Lead w/ knee, check the time	HW: 3-4x10/leg NON HW: 2x10/leg
Trail Leg on wall	Knee around quick, knee to armpit	HW: 3-4x10/leg NON HW: 2x10/leg
Side Slides	Toe up, knee to armpit (3 up, finish in front quick)	HW: 3x5/leg NON HW: 2x5/leg
Walking/jogging trail 3 hurdles	Knee to armpit, cut off the trail	HW: 3-4x3/leg NON HW: 2x3/leg
Over the Tops 3 hurdles	Run the zone (cone in-cone out)	HW: 5-6 sets NON HW: 3-4 sets
Randoms	Keep speed- take w/ whichever leg comes up	HW: 5-6 sets NON HW: 3-4 sets



Progressing to a hurdle in a workout

- Need to make the athlete comfortable with a hurdle
 - Worst result possible: they are afraid of the hurdle.
- Start intervals with cones & tape, cones & stick, pop-up hurdles, etc.
 - Creates confidence and allows them to always stay fast through the zones and attack, especially when emphasizing alternating----builds a no fear attitude
- Lower hurdle heights to practice faster clearance
- *** *Develop a Comfort to alternate*
- *Late season, more race considerations*

Cutting Back & Height

- Rarely have multiple flights of hurdles @ race marks. That pattern is for 100%
 - training session cannot replicate (adrenaline, competition, etc.)
 - Cut back based on the percentage of max effort
 - Usually by 2s for faster workouts (90-95%)
 - Usually by 3's for (85-90%)
 - No need to hurdle under 85%

Categories of Hurdle Workouts		
WHY am I doing this workout?		
Hurdle Capacity	Hurdle Zones	Race Modeling
Ability to hurdle when fatigued... alternating when necessary	-Ingrain the idea of attacking in & out of the hurdle (7m in front to 7m after)	-How the race <i>feels</i> -Simple breakdown
- Must replicate how to approach this last part of the race (lactic tolerance & general fatigue)	-developing a comfort for the rhythm & feel -rhythm changes= lead leg changes	<i>1st 100m:</i> Attack w/ speed early <i>2nd 100m:</i> keep speed by alternating <i>Final 100m:</i> Must replicate how to approach this last part of the race (lactic tolerance)

Hurdle Capacity Workouts
<ul style="list-style-type: none"> • All season workouts, but progress w/ the athlete • Always have visual marker In & Off hurdle • EARLY SEASON: 100 Turn Arouds: <ul style="list-style-type: none"> – 100w/ 2 hurdles, 100w/ last 4 hurdles • MID SEASON: Repeat 200s over hurdles <ul style="list-style-type: none"> – Starting point: 5-6x 200m over – 80-85% progress pace to last 200m of race – Typically run as Strait-Turn-Strait • LATE SEASON: 50's over 2-3 hurdles mid Special Endurance or Speed Endurance workout <ul style="list-style-type: none"> – 2x(300m-4x50m-200m)@85-87%, Special End II – 2x (220m-4x50m-180m) @ 90-93% Speed End.

Hurdle Zone Workouts
<ul style="list-style-type: none"> • Anytime of the season based on Volume & Intensity • 150's or 200s @ 85% using full turn: <ul style="list-style-type: none"> – 4-6 hurdles (work to race height) – 10-30m apart. – Change throughout the workout. Attack & react

Race Modeling Workouts

- Typically mid-late season
- 3-4x 300's, with varying hurdle segments
 - 2 Variations: Hurdles-flat- Hurdles or Flat-hurdles-flat
 - Cutback hurdles
 - Zone 1: Attack & Establish Tempo
 - flights 1,2, 3, (4)
 - Zone 2: Turn work, “keep speed & be ugly” alternate
 - flights 3, 4, 5, (6)
 - Zone 3: Out of gas @ the end
 - flights (5), 6, 7, 8

Sprint Workouts...

Sequence Workouts & Weekly Volume

Two Simple Categories for Organizing Workouts

ATP-CP Work	Daily Volume (meters)		Intensity (% of max effort)	
	In season	Preseason	In season	Preseason
Speed Development (Max Velocity)	400-500m	500-700m	90-98%	
Speed Development (Acceleration)	500-700m	700-900m	90-98%	
Speed Endurance	600-1000m		93-97%	
Specific Energy System Work	Daily Volume (meters)		Intensity (% of max effort)	
	In season	Preseason	In season	Preseason
Special Endurance I	1300-2000m	2000-3000m	75-90%	70-85%
Special Endurance II (Lactate Threshold, Aerobic Capacity)	1000-1800m	1300-2000m	85-90%	80-90%
Extensive Tempo	1200-2000m	1400-2000m	77-85%	70-75%

MEETS

Meet Selection

- Experienced hurdler- choose 300h races at meets for two reasons
 1. Work on something specific: choose a low-key meet where they won't feel a lot of pressure to hit a time. That way they stay focused on specific elements
 2. Get a Race: choose a competitive meet to find out where they are (you and them). Don't load them up with events before the 300h's (maybe a 4x2 leg).

Newbie or Novice- Don't put them in a race until they are ready! Set them up for success
 – Preferably at a Freshman/JV/ Quad

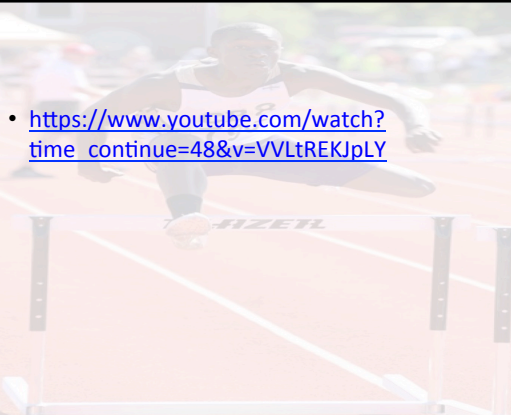
The Art of Coaching the 300IH

- Do everything with a purpose! Never forget that speed is most important part of the race.
- Be prepared to make adjustment to your sessions on the fly
- Understand and teach the athletes what running the 300IH feels like, as opposed to what it's supposed to look like
- Give your athletes constant feedback during workouts
- Do everything with a purpose!
- Give motor response cues during intervals and races
- KNOW YOUR ATHLETES!

Got more questions?

- Contact me at:
npbuckva@gmail.com





- https://www.youtube.com/watch?time_continue=48&v=VVLtREKJpLY
