

Rhythmic Hurdling: The Search for the Holy Grail

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Rhythmic Hurdling:

The Search for the Holy Grail

100H/110HH Edition

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My Background

- Bridgewater State College
- University of Houston
- Wheaton College
- Brown University
- Harvard University



Training & Philosophy

- **Vince Anderson**
- **Andreas Behm**
- **Fletcher Brooks**
- **Leroy Burrell**
- **Ed Delgado**
- **Steve Dudley**
- **Mike Ekstrand**
- **Ron Grigg**
- **Reuben Jones**
- **Todd Lane**
- **Boo Schexnayder**
- **Dennis Shaver**
- **Paul Souza**
- **Mike Takaha**
- **Tom Tellez**
- **Latif Thomas**
- **Kebba Tolbert**
- **Gary Winkler**
- **Derek Yush**
- **All of the Athletes I have worked with.**




Hurdling Philosophy



Hurdling Philosophy Cont...

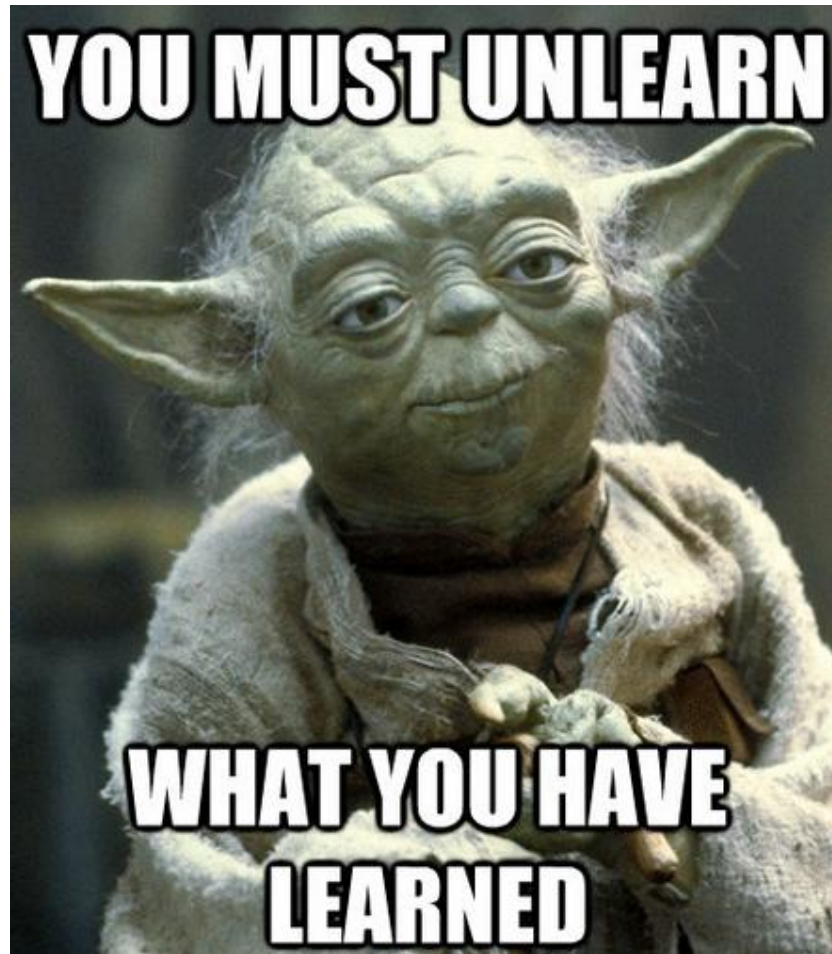


Hurdle Rhythm

-  Rhythm to H1
-  Rhythm into & off of each hurdle
-  Rhythm between the hurdles



Coach be like...



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Teaching My Current Athletes

 High School Personal Best:

H 14.34 – 110HH (39”)

 Freshman Year:

H 14.60 – 110HH (42”)

 Sophomore Year:

H 14.13 – 110HH (42”)

 Junior Year:

H 13.80 – 110HH (42”)

 Senior Campaign:

H ??? – 110HH (42”)



What is a given in the hurdles?



Rhythm to H1

- H** Starting line to H1 is 13.72m for the men
- H** Starting line to H1 is 13m for the women
- H** Takeoff approximately 2m before the hurdle
- H** Therefore:
 - H** Men need to take 7 or 8 steps then takeoff at approximately 11.72m
 - H** Women need to take 7 or 8 steps then takeoff at approximately 11.00m



Rhythm to Hurdle 1 vs Sprinting

- 🏆 Rhythm to H1 feels a little more like slow to fast and big to small.
- 🏆 Similar to sprinting, however, body angles come up faster in the hurdles to allow hurdle clearance.
- 🏆 The overall stride frequency is higher in hurdling.
- 🏆 There is a modified drive phase that extends to H3.

8 Stride Pattern to H1

- Men:

- .65

- 1.24 – 1.89m

- 1.36 – 3.25m

- **1.46 - 4.71m**

- 1.60 – 6.31m

- 1.74 – 8.05m

- 1.84 – 9.89m

- **1.74 – 11.63m**

- Women:

- .60

- 1.16 – 1.76m

- 1.33 – 3.09m

- **1.43 – 4.52m**

- 1.53 – 6.05m

- 1.63 – 7.68m

- 1.73 – 9.41m

- **1.63 – 11.04m**

Aries Merritt Takes 8 Steps



7 Stride Pattern to H1

- Men:

- .76m

- 1.42 – 2.18m

- 1.62 – 3.80m

- **1.77 – 5.57m**

- 1.93 – 7.50m

- 2.08 – 9.58m

- **2.00 – 11.58m**

- Women:

- .65m

- 1.40 – 2.05m

- 1.60 – 3.65m

- **1.75 – 5.40m**

- 1.85 – 7.25m

- 1.95 – 9.20m

- **1.85 – 11.05m**

Aries Merritt Takes 7 Steps



7 vs 8 Side by Side



How many pushes?

- ♣ Once a basic rhythm is developed using the stride pattern.
- ♣ Then start to reinforce the number of pushes the athlete needs to take out of the blocks.
- ♣ Some push for as many as 4 and as little as almost 0 and others are somewhere in between.



Rhythm into & off of each hurdle

- H** The sound of the last two steps into the hurdle should be closer together.
- H** The sound of the TD off of the hurdle & the 1st step should also be closer together.
- H** What happens on one side happens on the other side.
 - H** Long & slow into the hurdle = long & slow off of the hurdle
 - H** Cut & push into the hurdle keeps the sound closer together on the front end.
 - H** Therefore, the sound on the other side will more likely be close together

First teach the hurdler to cut & push



Cut Step Drills

 Teach In Place Cut Step Drill

 Fix Hurdle Penetration Drill

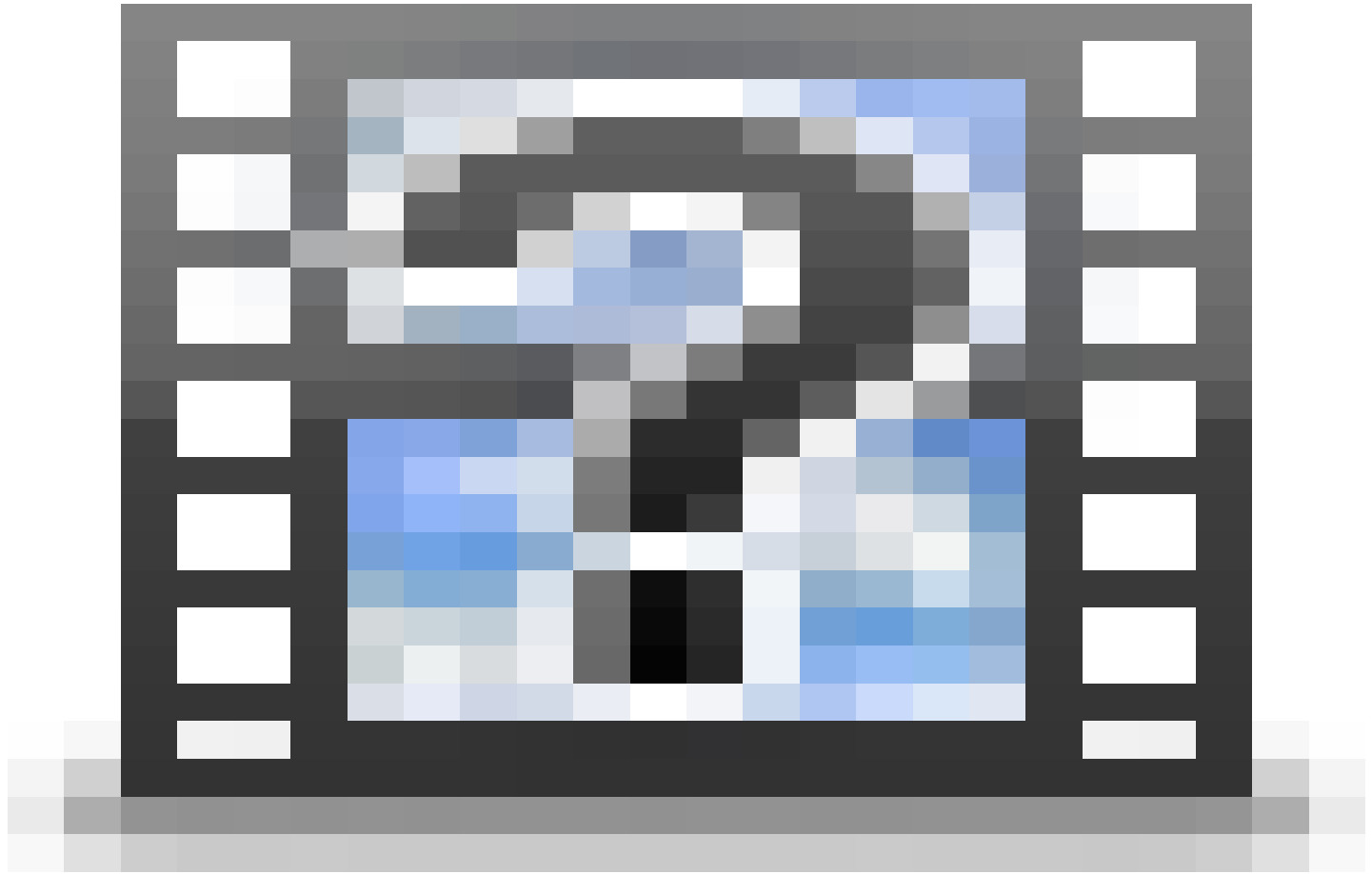
 Couple the Cut Step Drills



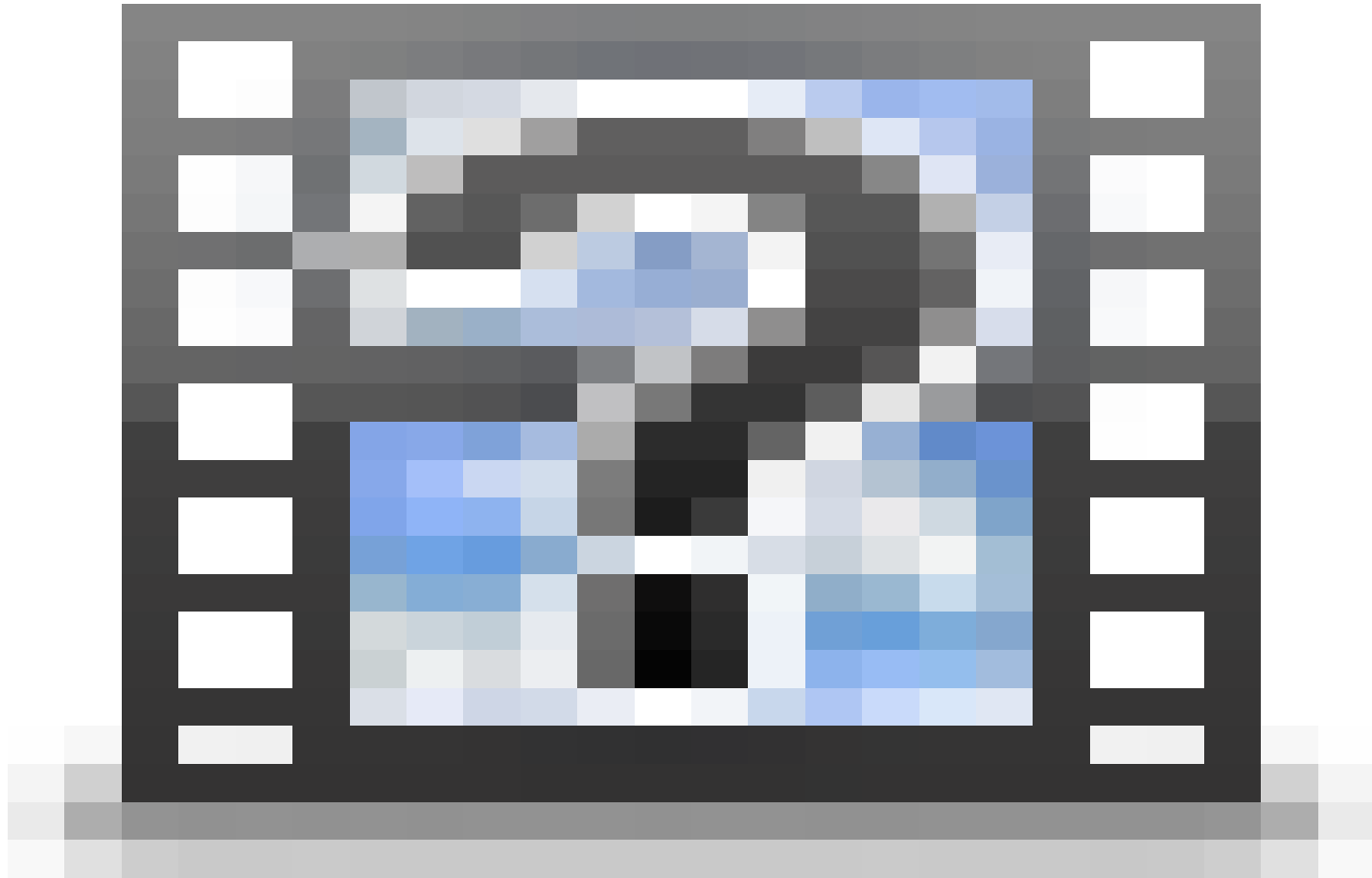
In Place Cut Step






Hurdle Penetration Drill



Coupling the Drills

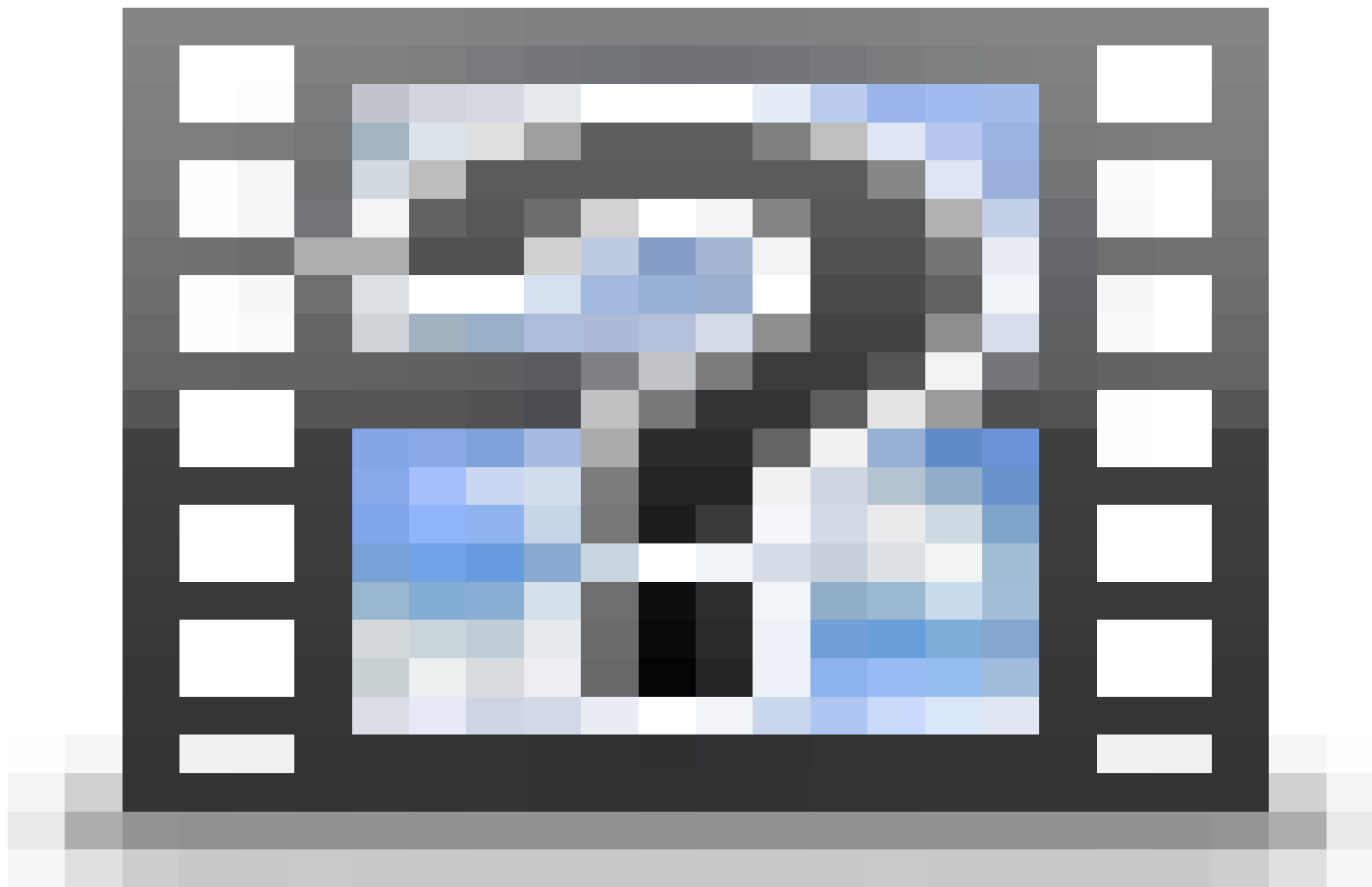


Now you can teach the rhythm of running off the hurdle

-  Trail Leg Chase
-  Drop & Pop into shuffle
-  Combination of the two



Trail Leg Chase



Drop & Pop into Shuffle



Drop & Pop not ~~Pop & Lock~~

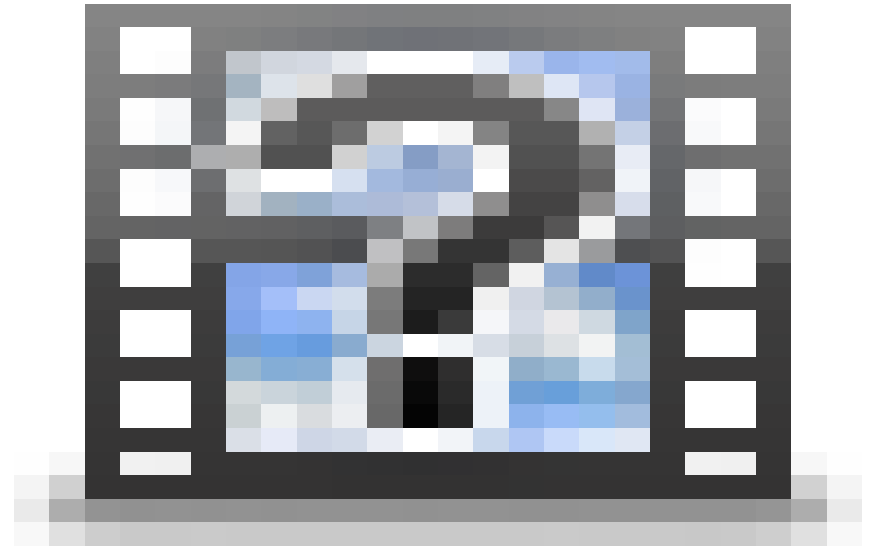


Combination Drill

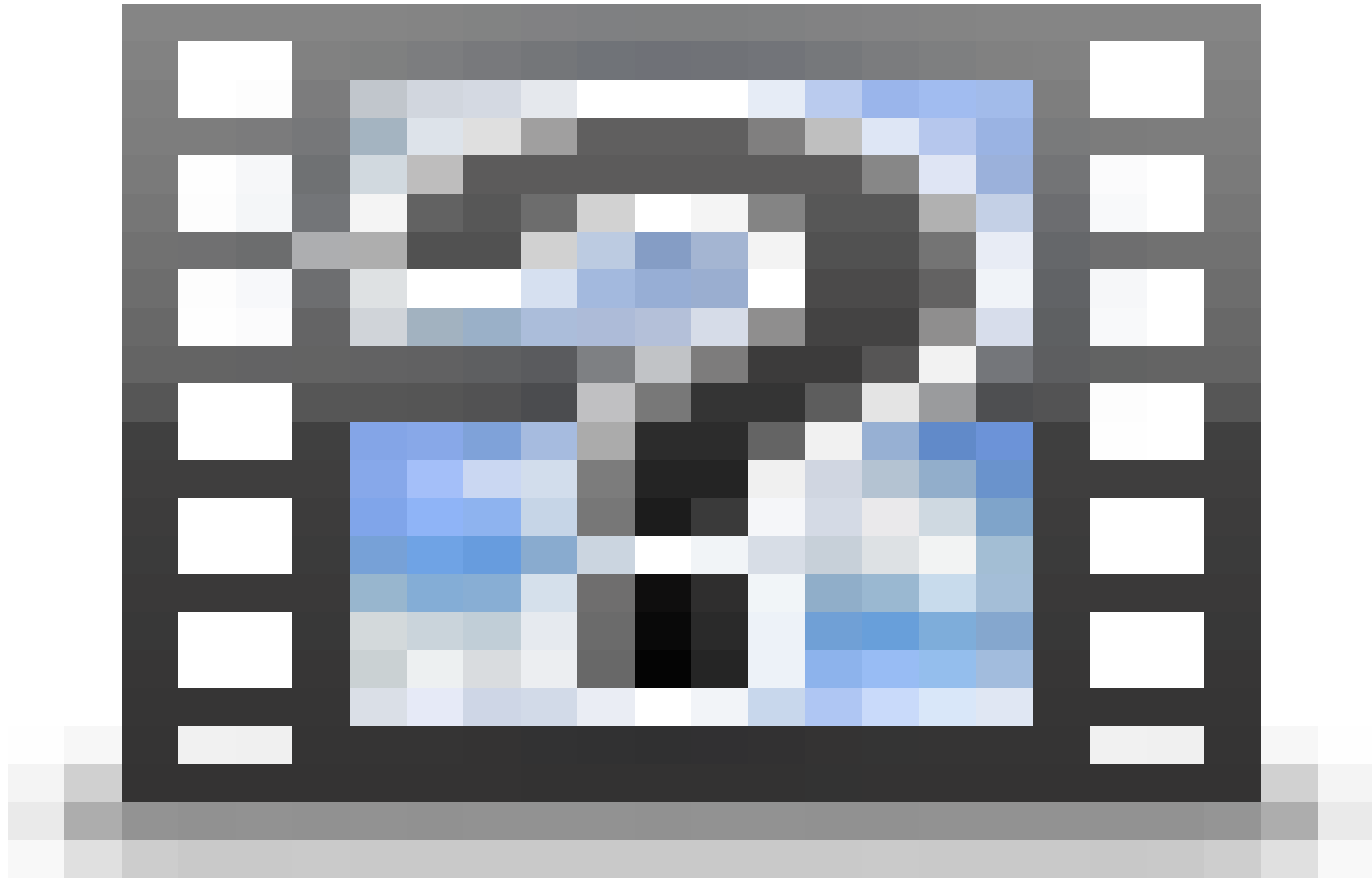


Running Into & Off of the Hurdle

- One Step Drill
 - Spacing
 - Farther apart to push
 - Not too far (no reaching)
 - Listen for rhythm



Running Into & Off of the Hurdle



What else is a given in the hurdles?



Rhythm between the hurdles

- 🏆 Trying to 3-step: 6 feet vs 5 feet tall or 13" or 16"
- 🏆 Stride length is predetermined because of consistent hurdle spacing of 8.5m (w) and 9.14m (m).
- 🏆 Stride frequency is the limiting factor in the 100/110 hurdle races.



Stride Length & Stride Frequency

Sprinting

H Maximum Stride Length

H Men are around 2.40m

H Women are around 2.20m

H Maximum Stride Frequency

Hurdling

H Optimum Stride Length

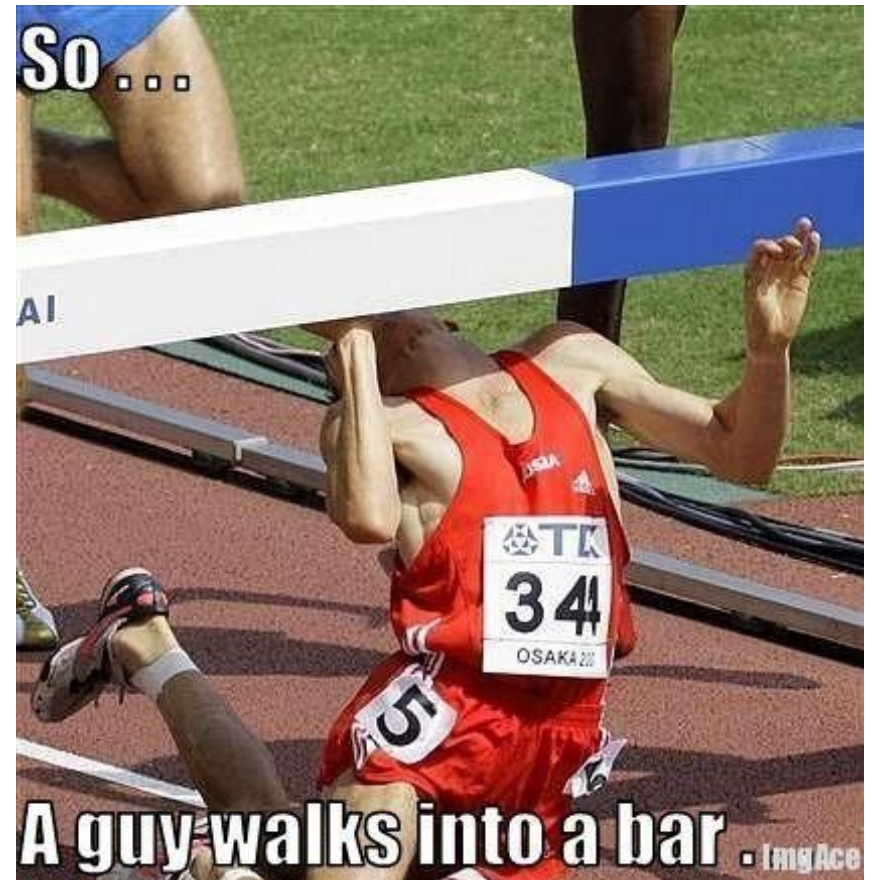
H Men are around 1.94m

H Women are around 1.83m





H Optimum Stride Frequency

 Hurdling “strides” feel like shuffling because they are smaller in length than sprinting.

Sprinting vs Sprint Hurdling



Running Between the Hurdles

-  Take off mark into each hurdle
 - H** Men – 2.1-2.2m before the hurdle
 - H** Women – 1.9-2.0m before the hurdle
-  Touchdown mark after each hurdle
 - H** Men – 1.30-1.40m after the hurdle
 - H** Women – 0.9-1.0m after the hurdle
-  Women take 3 steps in approx. 5.5m (ave. SL is 1.83m/6')
-  Men take 3 steps in approx. 5.84m (ave. SL is 1.94m/6'4")

Shuffling 101

- 🏡 5 Step Hurdling with hurdles at normal marks
- 🏡 Simple Wickets (close together)
- 🏡 Ankling
- 🏡 Straight Leg Shuffle Drill
- 🏡 Distance Between the Sticks

EVERY
DAMN
SHUFFLE



Simple Wickets

- H** Random run in with 4-8 steps.
- H** 4-9 wickets with the following spacing:
 - H** 4-9 x 1.30
 - H** 4-9 x 1.35
 - H** 4-9 x 1.40



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Ankling



Straight Leg Shuffle Drill



Straight Leg Shuffle Drill

- ♣ Spacing for men is 4.26m apart
- ♣ Spacing for women is 4.0m apart
- ♣ Add a weight vest for variation








All Three Drills

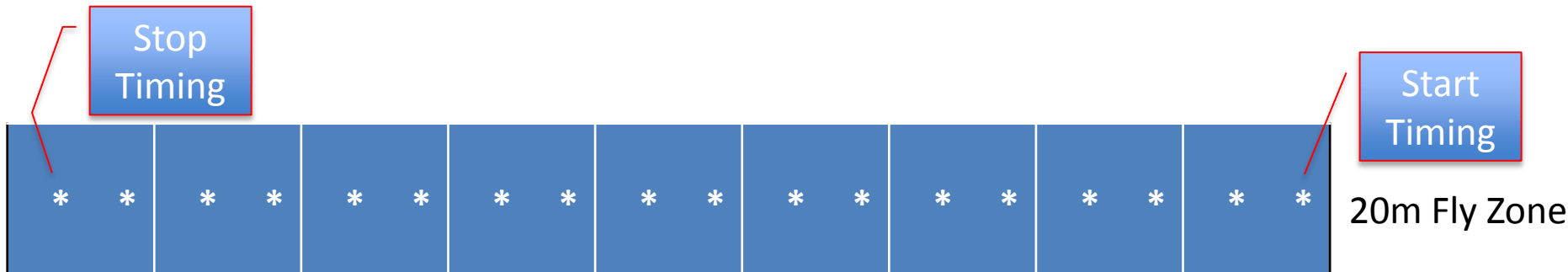
- 🏆 Teach early as extension of the WU.
- 🏆 Start timing the drills to add a new element of execution.
- 🏆 Use any of these at the end of sprint workout to end things with hurdle rhythm.



Distance Between the Sticks

Women:

-  2.0m to the hurdle and 1.0m off the hurdle = 3.0m into & off of the hurdle
-  3.0m minus 8.5m = 5.5m of running between the hurdles
-  5.5m divided by 3 (number of steps) = 1.83m average stride length
-  This drill requires 2 strides between each stick
-  2 times 1.83m = 3.66m between each stick



Stride Length & Stride Frequency

- H** Between the hurdles for men:
 - H** TD: 1.40
 - H** Step 1: 1.82 (get away)
 - H** Step 2: 1.94
 - H** Step 3: 1.88
 - H** TO: 2.10
 - H** Average is 1.88 because of TO & TD.
- H** Definitely a work in progress.

Hurdle Training



Option 2

Rhythm

Touchdown Times



Between the Hurdles

Feel the Rhythm

Goal Time	1 st Hurdle	Rhythm Between
15	2.6 seconds	1.2 seconds
14	2.5 seconds	1.1 seconds
13	2.4 seconds	1.0 seconds

Acceleration Rhythm to H1

We spend the majority of the fall learning how to accelerate properly through hurdles 1, 2 and 3.




Discount Hurdle Philosophy


- 🏆 Train with hurdles closer and lower than normal to attain desired rhythms.
- 🏆 Why is this crucial?
 - 🏆 Record proper cadence




What else do we know?

 The number of steps in the hurdles are predetermined.

 8/3/10

 7/3/10

 I know the steps to the rumba. However, my understanding of the rhythm of the dance is not great.

 Therefore my rumba stinks.

Be Prepared for higher velocities

- H What happens when the hurdles start coming up faster?
 - H Ahhhh...the “Oh Shit Moment”
 - H This is a good problem.
- H Keep discounting hurdles.
- H Use 5 step spacing to keep up velocity.
- H Use lower hurdles to keep up velocity.
- H Do drills faster
 - H One step (Cardi Drill)



Rhythm of the Hurdle Race

- ♣ Ultimately looking to increase velocity to H5-H6.
- ♣ Looking to see if there is limited drop off in times from hurdle to hurdle.
- ♣ If not, what needs to happen?
 - ♣ Discount & 3 Step (as mentioned)
 - ♣ 5 Step to Increase Velocity (more space)



Various Steps and Distances

Rhythm	Boys	Girls	Men	Women
3 steps	8.3-8.5m	7.80-8.0m	8.5-8.8m	8.0-8.3m
5 steps	12.5	11m	13m	11.5m

3,3,3 vs 5,5,5 vs 3,3,5 vs 5, 3, 3

Favorite Workout for a Hurdler Up To 12 Hurdles

- Keep in mind:
- Hurdles are cheated
- Hurdles are lowered (1, 6, 9, 11, 12)
- Some even lower than others
- Reinforce hurdle rhythm all the way down the track!!!
- Can't fit 12 hurdles indoors (really?)

Up and Backs

	To Hurdle 1	Hurdle 2	Hurdle 3	Hurdle 4	Hurdle 5	Hurdle 6
Women Up	30" Height 11.5-12.5m	33" Height 8.3m	33" Height 8.3m	33" Height 8.3m	33" Height 8.3m	30" Height 8.3m
Women Back	30" Height 11.5m	33" Height 8.0m	33" Height 8.0m	30" Height 7.8m	27" Height 7.8m	24" Height 7.8m
Men Up	36" Height 12.5-13.5m	39" Height 8.5m	39" Height 8.5m	39" Height 8.5m	39" Height 8.5m	36" Height 8.5m
Men Back	36" Height 12.5m	39" Height 8.3m	39" Height 8.3m	36" Height 8.0m	36" Height 8.0m	33" Height 8.0m

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**I used to have a fear of
hurdles**



But then I got over it



Again...what is a given in the hurdles?



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It's A Competition



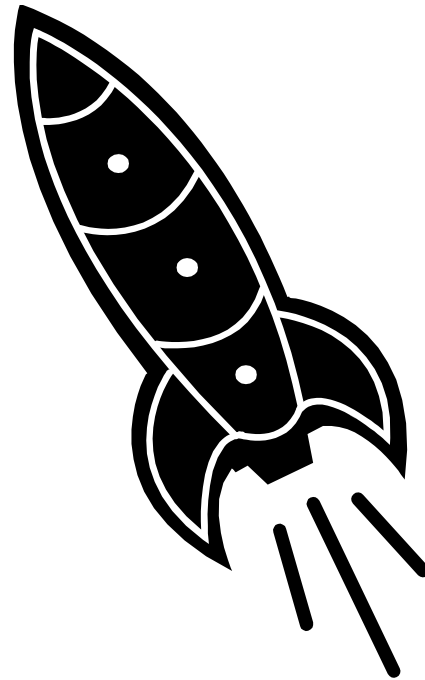
Teach Whole – Part - Whole

- 🏆 Teach the entire process over low and cheated hurdles.
- 🏆 Teach the individual components to hurdling successfully.
- 🏆 The whole process starts to come together in races & race situations.



Recap

- Just remember:
 - We are trying to build rockets, but it is not rocket science.



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Any Questions?



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Title

H Text 1

H Subtext 1

H Text 2

H Subtext 2

H Text 3

H Subtext 3

H SubSubtext 3

H Text 4

H Subtext 4

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Outline

 Topic 1

 Topic 2

 Topic 3

 Topic 4

